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OCTOBER, 1972

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—SPACE SHUTTLE—

**AERODYNAMIC STABILITY AND
CONTROL CHARACTERISTICS OF
TBC SHUTTLE BOOSTER
AR-11981-3**

by

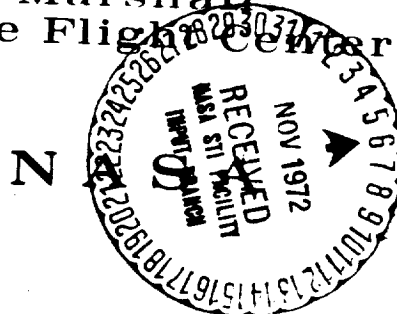
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**MSFC 14-INCH
TRISONIC WIND TUNNEL**

**Marshall
Space Flight Center**



SADSAC SPACE SHUTTLE
AEROTHERMODYNAMIC
DATA MANAGEMENT SYSTEM

CONTRACT NAS3-4016
MARSHALL SPACE FLIGHT CENTER

SPACE DIVISION  **CHRYSLER
CORPORATION**

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OCTOBER, 1972

SADSAC/SPACE SHUTTLE
WIND TUNNEL TEST DATA REPORT

CONFIGURATION: TBC Shuttle Booster AR-11981-3

TEST PURPOSE: To investigate the aerodynamic stability and control
characteristics of a shuttle booster configuration at
M = 0.6 to 5.0

TEST FACILITY: MSFC 14 - Inch Trisonic Tunnel

TESTING AGENCY: The Boeing Company

TEST NO. & DATE: MSFC TWT 496; 15 July - 3 August, 1971

FACILITY COORDINATOR: Jim Weaver

PROJECT ENGINEER(S): E. R. Phelps
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CONTRACT NAS 8-4016

AMENDMENT 174

DRL 297 - 84a

This report has been prepared by Chrysler Corporation Space Division under a Data Management Contract to the NASA. Chrysler assumes no responsibility for the data presented herein other than its display characteristics.

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ABSTRACT

A 0.002456 scale model of the Boeing Company space shuttle booster configuration AR-1198I-3 was tested in the MSFC 14-inch trisonic wind tunnel from July 15 through August 3, 1971. This test was an extension of the MSFC TWT 492 test and was proposed to "fill-in" the original test run schedule as well as to investigate the aerodynamic stability and control characteristics of the booster with three wing configurations not previously tested.

The configurations tested included a cylindrical booster body with an axisymmetric nose, clipped delta canards that had variable incidence from 0° to -60° , four different aft body mounted wing configurations, two vertical fin configurations, and a Grumman G-3 orbiter configuration. Tests were conducted over a Mach range from 0.6 to 5.0.

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SUMMARY

Aerodynamic stability and control characteristics of the AR-1198I-3 shuttle booster configuration were investigated during the MSFC TWT 496 test in an attempt to "fill-in" the test run schedule of the MSFC TWT 492 test. However, caution should be taken when using these data in conjunction with data from TWT 492, as the reference length used in the reduction of the pitching moment data is not consistent for the two tests.

The configurations investigated included a cylindrical booster body with an axisymmetric nose, clipped delta canards that had variable incidence from 0° to -60° , four different aft body mounted wing configurations, two vertical fin configurations, and a Grumman G-3 orbiter configuration. One wing configuration had 30 percent chord elevons which could be set at 0° , $\pm 10^{\circ}$ and $\pm 30^{\circ}$ or be completely removed.

Pitch data were recorded through an angle of attack range from -10° to 60° and yaw data were obtained at fixed angles of attack of 0° , 10° , 15° , 30° and 50° in a β range from -10° to 10° . A complete list of the run schedule and the parametric conditions is presented in the Dataset Collation Sheets.

NOMENCLATURE
General

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
a		speed of sound; m/sec, ft/sec
C_p	CP	pressure coefficient; $(p_l - p_\infty)/q$
M	MACH	Mach number; V/a
p		pressure; N/m^2 , psf
q	Q(NSM) Q(PSF)	dynamic pressure; $1/2\rho V^2$, N/m^2 , psf
RN/L	RN/L	unit Reynolds number; per m, per ft
V		velocity; m/sec, ft/sec
α	ALPHA	angle of attack, degrees
β	BETA	angle of sideslip, degrees
ψ	PSI	angle of yaw, degrees
ϕ	PHI	angle of roll, degrees
ρ		mass density; kg/m^3 , slugs/ft ³
<u>Reference & C.G. Definitions</u>		
A_b		base area; m ² , ft ²
b	BREF	wing span or reference span; m, ft
c.g.		center of gravity
$\frac{l}{c}_{REF}$	LREF	reference length or wing mean aerodynamic chord; m, ft
S	SREF	wing area or reference area; m ² , ft ²
	MRP	moment reference point
	XMRP	moment reference point on X axis
	YMRP	moment reference point on Y axis
	ZMRP	moment reference point on Z axis
<u>SUBSCRIPTS</u>		
b		base
l		local
s		static conditions
t		total conditions
∞		free stream

NOMENCLATURE (Continued)

Body-Axis System

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
C_N	CN	normal-force coefficient; $\frac{\text{normal force}}{qS}$
C_A	CA	axial-force coefficient; $\frac{\text{axial force}}{qS}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_{A_b}	CAB	base-force coefficient; $\frac{\text{base force}}{qS}$ $-A_b(P_b - P_\infty)/qS$
C_{A_f}	CAF	forebody axial force coefficient, $C_A - C_{A_b}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
C_n	CYN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS_b}$
C_l	CBL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS_b}$

Stability-Axis System

C_L	CL	lift coefficient; $\frac{\text{lift}}{qS}$
C_D	CD	drag coefficient; $\frac{\text{drag}}{qS}$
C_{D_b}	CDB	base-drag coefficient; $\frac{\text{base drag}}{qS}$
C_{D_f}	CDF	forebody drag coefficient; $C_D - C_{D_b}$
C_Y	CY	side-force coefficient; $\frac{\text{side force}}{qS}$
C_m	CLM	pitching-moment coefficient; $\frac{\text{pitching moment}}{qS_{REF}}$
C_n	CLN	yawing-moment coefficient; $\frac{\text{yawing moment}}{qS_b}$
C_l	CSL	rolling-moment coefficient; $\frac{\text{rolling moment}}{qS_b}$
L/D	L/D	lift-to-drag ratio; C_L/C_D

NOMENCLATURE (Continued)

Surface Definitions

<u>SYMBOL</u>	<u>SADSAC SYMBOL</u>	<u>DEFINITION</u>
ϵ		wing tip mounted vertical tail (V_2) roll-out angle; degrees
i_w		wing incidence angle; degrees
δ_a	AILRON	aileron, total aileron deflection angle; degrees (left aileron - right aileron)/2
δ_c	CANARD	canard, surface deflection angle, positive deflection - trailing edge down; degrees
δ_e	ELEVTR	elevator, surface deflection angle, positive deflection - trailing edge down; degrees $(\delta_{e_L} + \delta_{e_R})/2$
δ_{e_L}	DEL	left wing elevon surface deflection angle, positive deflection - trailing edge down; degrees
δ_{e_R}	DER	right wing elevon surface deflection angle, positive deflection - trailing edge down; degrees

ADDITIONS TO NOMENCLATURE

<u>SYMBOL</u>	<u>DEFINITION</u>
DCN, DCLM, DCA, DCAF, DCAB DCL, DCY, DCYN, DCBL	Incremental coefficients, algebraic difference of two runs
CNAF \emptyset , CIMAF \emptyset , CAAF \emptyset , CAFAF \emptyset	Coefficient values at zero angle of attack ($\alpha = 0.$)
CNAAF \emptyset , CMAAF \emptyset	Local coefficient derivatives with respect to α , evaluated at $\alpha = 0.$; per degree
DCY/DB, DCYNDB, DCBLDB	Local lateral coefficient derivatives with respect to β , evaluated at $\beta = 0.$; per degree
DCIM/DCN	Local longitudinal static stability derivative; ratio of local pitching moment derivative with α , and local normal force coefficient derivative with α
DCYN/DCY	Local directional static stability deri- vative; ratio of local pitching moment derivative with β , and local lateral force coefficient derivative with β
CP/D1	Longitudinal center of pressure - DCIM/DCN evaluated at $\alpha = 0.$
CP/D2	Lateral center of pressure - DCYN/DCY evaluated at $\beta = 0.$

CONFIGURATIONS INVESTIGATED

CONFIGURATION NOMENCLATURE

B ₂	Cylindrical body with an axisymmetric nose l/d = 8.0 (ref. l = 272 ft., d = 34 ft.)
W ₄	5680 square foot, aspect ratio 2.8, swept wing
W ₆	5322 square foot, aspect ratio 4.0, swept wing
W ₆ ^H	Wing W ₆ mounted on top of aft body section
W ₉	8865 square foot, aspect ratio 2.5, delta wing mounted on bottom of aft body section
C ₁ ²	900 square foot, aspect ratio 1.5, canard located on the body centerline
V ₁	1000 square-foot vertical tail mounted on the body centerline
V ₂	Two 618 square-foot wing tip fins with 10° roll-out
O ₁ ¹	Orbiter model mounted on the booster in the mid-position with no body spacers used.

COMBINATIONS TESTED

B ₂	B ₂ W ₉
B ₂ W ₆	B ₂ W ₉ V ₁
B ₂ C ₁ ²	B ₂ W ₉ C ₁ ² V ₁
B ₂ W ₆ C ₁ ²	B ₂ W ₆ ^H C ₁ ²
B ₂ W ₆ C ₁ ² V ₂	B ₂ W ₆ ^H C ₁ ² V ₂
B ₂ W ₆ V ₂	B ₂ W ₄ V ₂
B ₂ W ₆ C ₁ ² V ₂ O ₁ ¹	B ₂ W ₄ C ₁ ² V ₂

TEST FACILITY DESCRIPTION

The Marshall Space Flight Center 14" x 14" Transonic Wind Tunnel is an intermittent blowdown tunnel which operates by high pressure air flowing from storage to either vacuum or atmospheric conditions. A Mach number range from .2 to 5.85 is covered by utilizing two interchangeable test sections. The transonic section permits testing at Mach 0.20 through 2.50, and the supersonic section permits testing at Mach 2.74 through 5.85. Mach numbers between .2 and .9 are obtained by using a controllable diffuser. The range from .95 to 1.3 is achieved through the use of plenum suction and perforated walls. Mach numbers of 1.44, 1.93 and 2.50 are produced by interchangeable sets of fixed contour nozzle blocks. Above Mach 2.50 a set of fixed contour nozzle blocks are tilted and translated automatically to produce any desired Mach number in .25 increments.

Air is supplied to a 6000 cubic foot storage tank at approximately -40°F dew point and 500 psi. The compressor is a three-stage reciprocating unit driven by a 1500 hp motor.

The tunnel flow is established and controlled with a servo actuated gate valve. The controlled air flows through the valve diffuser into the stilling chamber and heat exchanger where the air temperature can be controlled from ambient to approximately 180°F. The air then passes through the test section which contains the nozzle blocks and test region.

Downstream of the test section is a hydraulically controlled pitch sector that provides a total angle of attack range of 20° ($\pm 10^\circ$). Sting offsets are available for obtaining various maximum angles of attack up to 90°.

TEST SETUP

The model was sting mounted on an internal balance. A bent sting was utilized which could be positioned to give fixed angles of α or β while the other angle was varied, or to extend the angle range in the pitch plane of the tunnel. Pitch runs were made with the model upright while sideslip runs were made in the tunnel pitch plane with the model and sting rolled 90° . Pitch data were taken through the normal sector angles of attack ($\pm 10^\circ$) and through an extended range of angle of attack to $+60^\circ$ utilizing the bent sting. Yaw data were obtained through the normal sector range ($\pm 10^\circ$) at fixed angles of attack of 0° , 10° , 15° , 30° and 50° .

Boundary layer trip strips were used and located as shown on Figure 14. No. 120 grit (0.0049") was used for all Mach numbers up to and including $M = 1.96$. For Mach numbers greater than 1.96, No. 54 grit (0.0138") was utilized.

Base pressures were measured in two positions at the base of the model. No cavity pressure was measured. The base pressures were located at approximately 3 o'clock and 9 o'clock when viewing the model from the rear.

For all configurations tested the wing incidence angle was maintained constant at 0 degrees. When utilizing the wing tip mounted vertical tails (V_2) the roll-out angle was kept constant at ± 10 degrees.

Three repeat runs were made at $M = 0.6$, 1.2 and 3.5 to determine the effect, if any, of wax fillers in the gap between the canard root chord and the body (reference Figure 6). The fillers were made so as to continue the canard leading edge sweep angle forward to intersect the body. The remainder of the test was conducted without any filler being utilized.

DATA REDUCTION

Six component aerodynamic force and moment data were recorded using an internal strain gage balance. Base pressures (C_{P_b} #1 and C_{P_b} #2) were recorded and utilized to correct the axial force measured data (C_A) to a condition corresponding to free stream pressure acting at the base region.

$$C_A = C_{A_F} + C_{A_B}$$

$$C_{A_B} = \frac{(C_{P_b} \text{ \#1} + C_{P_b} \text{ \#2})}{2} \frac{A_b}{S}$$

The force, moment and pressure data were reduced to coefficient form using the following reference values:

MODEL BASE AREAS

$$\text{Wing } W_6^H = 0.8494 \text{ square inches}$$

$$\text{Wing } W_9 = 0.9454 \text{ square inches}$$

$$\text{All Other Configurations} = 0.7854 \text{ square inches}$$

REFERENCE AREAS (each wing will use its own gross area)

$$\text{Wing } W_4 = 4.9327 \text{ square inches}$$

$$\text{Wing } W_6 = 4.6225 \text{ square inches}$$

$$\text{Wing } W_6^H = 4.6225 \text{ square inches}$$

$$\text{Wing } W_9 = 7.7005 \text{ square inches}$$

$$\text{Wings Off} = 4.6225 \text{ square inches}$$

REFERENCE LENGTHS (each wing will use its own total span/root chord)

	<u>Lateral</u>	<u>Longitudinal</u>
Wing W ₄	3.72 inches	1.898 inches
Wing W ₆	4.30 inches	1.536 inches
Wing W ₆ ^H	4.30 inches	1.536 inches
Wing W ₉	4.392 inches	3.170 inches
Wings Off	4.30 inches	1.536 inches

MOMENT REFERENCE CENTER

X = +2.40 inches (ahead of booster base)

Y = Z = 0

TABLE I.

TEST CONDITIONS
TEST TWT 496

MACH NUMBER	REYNOLDS NUMBER per unit length	DYNAMIC PRESSURE (pounds/sq. inch)	STAGNATION TEMPERATURE (degrees Fahrenheit)
0.60	$8.5 \times 10^6/\text{FT}$	7.3	100° (NOMINAL)
0.90	$7.7 \times 10^6/\text{FT}$	9.0	
1.00	$7.2 \times 10^6/\text{FT}$	9.0	
1.20	$6.6 \times 10^6/\text{FT}$	9.0	
1.96	$7.0 \times 10^6/\text{FT}$	10.2	
3.50	$6.9 \times 10^6/\text{FT}$	6.8*	
4.96	$5.6 \times 10^6/\text{FT}$	3.0**	↓

BALANCE UTILIZED: MSFC BALANCE #227

CAPACITY:

NF 240 lbs
 SF 80 lbs
 AF 25 lbs
 PM 300 in-lbs
 YM 100 in-lbs
 RM 50 in-lbs

ACCURACY:

COEFFICIENT
TOLERANCE:

COMMENTS:

* $P_0 = 60 \text{ psia}$
 ** $P_0 = 90 \text{ psia}$

TABLE II.

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☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCID	PARAMETER VALUES	NO. OF RUNS	MOI. FRACTIONS (OR ALTERNATE INDEPENDENT VARIABLE)
R3601A	B ₂	A	0	4	0.6
01M		M	-	6	0.9
01K		K	↑	6	1.0
02A	B ₂ C ₂	A	0	3	1.2
04M		M	-40	1	1.96
05K		K	-60	1	3.5
03H		H	-20	1	4.76
04I		I	-40	1	22.3
06M	W ₆ B ₂	M	0	3	143/0
06K		K	0	4	147/0
06G		G	0	3	147/0
06F		F	0	1	147/0
06I		I	0	2	147/0
06A	W ₆ B ₂ V ₂	A	0	3	066/0
11A		A	0	3	066/0
07M		M	0	4	066/0
07K		K	0	4	066/0
09K		K	0	4	066/0
R3609U	(NO. 54 GRID)	K	0	1	066/0

[illegible]

TABLE II. (CONTINUED)
TEST TWT #496 DATA SET COLLATION SHEET

$$\delta_c = \frac{\delta_{c1}}{\delta_{c2}}$$

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☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES		NO. OF RUNS	WACH RUNS (OR ALTERNATE INDEPENDENT VARIABLE)									
		A	B	δ_c	δ_{c1}	δ_{c2}	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4	2.6	2.8
R3807K	W6 B2 V2	K	0	100%	10	0	0.6	0.9	1.0	1.2	1.4	1.6	1.8	2.0	2.2	2.4
12K		K	0	0/0						13/0	14/0	15/0	16/0	17/0	18/0	19/0
09A		A	0	0						05/0	06/0	07/0	08/0	09/0	10/0	11/0
13S	W6 B2 C1	F	0	0						07/0	08/0	09/0	10/0	11/0	12/0	13/0
14H										14/0	15/0	16/0	17/0	18/0	19/0	20/0
15I										15/0	16/0	17/0	18/0	19/0	20/0	21/0
16J										16/0	17/0	18/0	19/0	20/0	21/0	22/0
17A	W6 B2 C1 V2	A	0	0						06/0	07/0	08/0	09/0	10/0	11/0	12/0
17S	(MAX FAIRINGS CANARD ETC)	A								06/0	07/0	08/0	09/0	10/0	11/0	12/0
18A		A								06/0	07/0	08/0	09/0	10/0	11/0	12/0
18L		M								13/0	14/0	15/0	16/0	17/0	18/0	19/0
19A		M								13/0	14/0	15/0	16/0	17/0	18/0	19/0
20K		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
17E		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
18H		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
19I		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
20T		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
21K		K								13/0	14/0	15/0	16/0	17/0	18/0	19/0
R3819T	(NO TRIP STRIPS)	F	0	0						05/0	06/0	07/0	08/0	09/0	10/0	11/0

COEFFICIENTS:

2 of 8
SCHEDULES

TABLE II (CONTINUED)

TEST TWT # 496 DATA SET COLLATION SHEET

$$\delta_e = \frac{\delta_{el}}{\delta_{er}}$$

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCID.		PARAMETERS/VALUES					NO. RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		A	B	δ_e	δ_e	ϵ	λ_w	λ_w		0.6	0.9	1.0	1.2	1.96	3.5	4.96			
R384C	W ₆ B ₂ C ₁ C ₂ V ₂	C	0	0	0	10	0		4	0.6	0.9	1.0	1.2	1.96	3.5	4.96			
41F		0	F						6	0.46/0.45/0.47/0.48/0.49/0.50/0.51/0.52/0.53/0.54/0.55/0.56/0.57/0.58/0.59/0.60									
41G		10							4	0.53/0.54/0.55/0.56/0.57/0.58/0.59/0.60									
41L		-10							4	0.53/0.54/0.55/0.56/0.57/0.58/0.59/0.60									
37A	W ₆ B ₂ C ₁ C ₂ V ₂	A	0						5	10/0.102/0.103/0.104/0.105/0.106/0.107/0.108/0.109/0.110									
37F		0	F						3	0.97/0.98/0.99/1.00									
37G		10							2	109/0.109/0.110									
38H		15							1										
39I		30							1										
40J		50							1										
33E	W ₆ B ₂ C ₁ C ₂	0							2	0.96/0.97/0.98/0.99/1.00									
33G		10							2	0.96/0.97/0.98/0.99/1.00									
34H		15							1										
35I		30							1										
R3836J		50							1										

CLM CN CY CBL ICYN CAE CAB ICBL CL COE
COEFFICIENTS
a or b
SCHEDULES
AC = -10, -8, -6, -4, -2, 0, 2, 4, 6, 8, 10 DEG.
IDPVAR(1) IDPVAR(2) INDV

TABLE II. (CONTINUED)

TEST TWT #496 DATA SET COLLATION SHEET

$$\delta_e = \delta_{e1} / \delta_{e2}$$

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DATA SET IDENTIFIER	CONFIGURATION	SCID.	PARAMETERS/VALUES				NO. OF RUNS	WAVELENGTHS (OR ALTERNATE INDEPENDENT VARIABLE)									
			δ_e	δ_{e1}	δ_{e2}	ϵ	λ	0.6	0.9	1.0	1.2	1.9%	3.5	4.9%			
23M	W9B2V	A	0	0	-	10	0	5	0.6	0.9	1.0	1.2	1.9%	3.5	4.9%		
23K		M						6	0.6	0.9	1.0	1.2	1.9%	3.5	4.9%		
23F		K						6	1.2	1.2	1.2	1.2	1.2	1.2	1.2		
23G		O						4	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
23H		F						4	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
23I								4	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
23J								4	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
24A	W9B2C2V	A	0	0	0			1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
26M		M						2	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
27K		K						1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
24E		O						1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
24G		F						1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
25H								1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
26I								1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
22F	W9B2	O						2	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
22G								1	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
22H								2	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
23822I								2	0.9	0.9	0.9	0.9	0.9	0.9	0.9		

COEFFICIENTS:

a or b
SCHEDULES

NASA-MSC-MAF

TABLE II. (CONCLUDED)

TEST WT 496 DATA SET COLLATION SHEET

$$\delta_e = \frac{\delta e_v}{\delta e_r}$$

☐ PRETEST
☒ POSTTEST

DATA SET IDENTIFIER	CONFIGURATION	SCHD.		PARAMETERS/VALUES				NO. OF RUNS	MACH NUMBERS (OR ALTERNATE INDEPENDENT VARIABLE)									
		A	B	δ_e	δ_c	ϵ	L_w		0.6	0.9	1.0	1.2	1.96	3.5	4.96			
R38284	W4 B2 1/2	A	0	0	-	10	0	2	113/0				011/0					
28L		M						3					173/0	240/0	239/0			
28K		K						2	111/0				016/0	241/0	229/0			
28F		O	F					2	112/0									
28S		10						1					018/0					
28H		15						1										
28I		30						1						234/0				
28J		50						1						243/0				
29A	W4 B2 C1 1/2	A	0	0				5	106/0	105/0	104/0	014/0	013/0					
31M		M			-40			6	114/0	115/0	116/0	172/0	231/0	230/0				
32K		K			-60			6	120/0	119/0	118/0	171/0	228/0	227/0				
29F		O	F		0			2	110/0			015/0						
29G		10			0			3	107/0	108/0	109/0							
30H		15			-20			1				009/0						
R38311		30			-40			4	117/0	174/0	232/0	233/0						

16

COEFFICIENTS: CLM CN CY CB CYN CAF CAB CPBL CL CDF

SCHEDULES: 0 or B

INDVAR(1) INDVAR(2) INDV

7576 10

NASA-MSFC-MAP

TABLE III.

MODEL COMPONENT: BODY - B₂

GENERAL DESCRIPTION: 0.002456 SCALE CYLINDRICAL BODY WITH AN
AXISYMMETRIC NOSE

DRAWING NUMBER: 1198-50

DIMENSIONS:

	<u>FULL-SCALE</u> <u>FT/FT²</u>	<u>MODEL SCALE</u> <u>IN/IN²</u>
Length	<u>271.44</u>	<u>8.000</u>
Max. Width	<u>33.931</u>	<u>1.000</u>
Max. Depth Dia.	<u>33.931</u>	<u>1.000</u>
Fineness Ratio	<u>8/1</u>	<u>8/1</u>
Area		
Max. Cross-Sectional	<u>904.21</u>	<u>0.7854</u>
Planform	<u> </u>	<u> </u>
Wetted	<u> </u>	<u> </u>
Base	<u>904.21</u>	<u>0.7854</u>

TABLE III. (CONTINUED)

MODEL COMPONENT: WING (W₁)GENERAL DESCRIPTION: 0.002456 SCALE SWEPT WING WITH AR = 2.8. $\Lambda_{LE} = 49.07$ DEGREESDRAWING NUMBER: 1198-45

DIMENSIONS:	FULL-SCALE FT/FT ²	MODEL SCALE IN/IN ²
<u>TOTAL DATA</u>		
Area		
Planform	<u>5678.92</u>	<u>4.9327</u>
Wetted		
Span (equivalent)	<u>126.22</u>	<u>3.72</u>
Aspect Ratio	<u>2.8</u>	<u>2.8</u>
Rate of Taper		
Taper Ratio	<u>0.4</u>	<u>0.4</u>
Diehedral Angle, degrees	<u>5°</u>	<u>5°</u>
Incidence Angle, degrees	<u>Variable</u>	<u>Variable</u>
Aerodynamic Twist, degrees		
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	<u>49.07</u>	<u>49.07</u>
Trailing Edge	<u>28.3°</u>	<u>28.3°</u>
0.25 Element Line	<u>45°</u>	<u>45°</u>
Chords:		
Root (Wing Sta. 0.0)	<u>64.40</u>	<u>1.898</u>
Tip, (equivalent)	<u>25.583</u>	<u>0.754</u>
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	<u>0012-84</u>	<u>0012-84</u>
Tip	<u>0012-84</u>	<u>0012-84</u>
<u>EXPOSED DATA</u>		
Area		
Span,	<u>92.290</u>	<u>2.72</u>
Aspect Ratio		
Taper Ratio	<u>474</u>	<u>474</u>
Chords		
Root	<u>53.983</u>	<u>1.591</u>
Tip	<u>25.583</u>	<u>0.754</u>
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE III. (CONTINUED)

MODEL COMPONENT: WING (W₆)

GENERAL DESCRIPTION: 0.002456 SCALE SWEEP WING WITH AR = 4.0.

$\Lambda_c/4 = 35^\circ$

DRAWING NUMBER: 1198-30A/34

DIMENSIONS:	FULL-SCALE	MODEL SCALE
TOTAL DATA	FT/FT ²	IN/IN ²
Area		
Planform	5321.79	4.6225
Wetted		
Span (equivalent)	145.90	4.30
Aspect Ratio	3.99	3.99
Rate of Taper		
Taper Ratio	0.3998	0.3998
Diehedral Angle, degrees	5°	5°
Incidence Angle, degrees	Variable	Variable
Aerodynamic Twist, degrees	0.00	0.00
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	38.93	38.93
Trailing Edge	20.75	20.75
0.25 Element Line	35.0	35.0
Chords:		
Root (Wing Sta. 0.0)	52.12	1.536
Tip, (equivalent)	20.83	0.614
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	0012-84	0012-84
Tip	0012-84	0012-84
EXPOSED DATA		
Area	3672.58	3.19
Span, (equivalent)	111.97	3.30
Aspect Ratio	3.40	3.40
Taper Ratio	0.464	0.464
Chords		
Root	44.82	1.321
Tip	20.83	0.614
MAC		
Fus. Sta. of .25 MAC		
W.P. of Root Chord Below ξ	5.40	0.162
B.L. of .25 MAC		
0.30 T.F. Flaps	$\delta = 0, +10^\circ, -20^\circ, -30^\circ$	

TABLE III. (CONTINUED)

MODEL COMPONENT: WING (W_6^H)
 GENERAL DESCRIPTION: 0.002456 SCALE SWEPT WING WITH AR = 4.0,
 $\Lambda_c/4 = 35^\circ$

DRAWING NUMBER: 1198-78

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> <u>FT/FT²</u>	<u>MODEL SCALE</u> <u>IN/IN²</u>
<u>TOTAL DATA</u>		
Area		
Planform	5321.79	4.6225
Wetted		
Span (equivalent)	145.90	4.30
Aspect Ratio	3.99	3.99
Rate of Taper		
Taper Ratio	0.3998	0.3998
Dihedral Angle, degrees	5°	5°
Incidence Angle, degrees	Variable	Variable
Aerodynamic Twist, degrees	0.00	0.00
Toe-In Angle		
Cant Angle		
Sweep Back Angles, degrees		
Leading Edge	38.93	38.93
Trailing Edge	20.75	20.75
0.25 Element Line	35.0	35.0
Chords:		
Root (Wing Sta. 0.0)	52.12	1.536
Tip, (equivalent)	20.83	0.614
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		
Airfoil Section		
Root	0012-84	0012-84
Tip	0012-84	0012-84
<u>EXPOSED DATA</u>		
Area		
Span, (equivalent)		
Aspect Ratio		
Taper Ratio		
Chords		
Root		
Tip		
MAC		
Fus. Sta. of .25 MAC		
W.P. of .25 MAC		
B.L. of .25 MAC		

TABLE III. (CONTINUED)

MODEL COMPONENT: WING (W₀)

GENERAL DESCRIPTION: 0.002456 SCALE DELTA WING WITH AR = 2.5.

A.L.E. = 52.5 DEGREES

DRAWING NUMBER: 1198-81

DIMENSIONS:		FULL-SCALE	MODEL SCALE
TOTAL DATA		FT/FT ²	IN/IN ²
Area			
Planform		8865.48	7.7005
Wetted			
Span (equivalent)		149.02	4.392
Aspect Ratio		2.50	2.50
Rate of Taper			
Taper Ratio		0.106	0.106
Diehedral Angle, degrees		5°	5°
Incidence Angle, degrees		0°	0°
Aerodynamic Twist, degrees			
Toe-In Angle			
Cant Angle			
Sweep Back Angles, degrees			
Leading Edge		52.5°	52.5°
Trailing Edge		0.56°	0.56°
0.25 Element Line			
Chords:			
Root (Wing Sta. 0.0)		107.56	3.170
Tip, (equivalent)		11.42	0.3365
MAC			
Fus. Sta. of .25 MAC			
W.P. of .25 MAC			
B.L. of .25 MAC			
Airfoil Section			
Root		0007-84	0007-84
Tip		0006-84	0006-84
EXPOSED DATA			
Area			
Span, (equivalent)			
Aspect Ratio			
Taper Ratio			
Chords			
Root			
Tip			
MAC			
Fus. Sta. of .25 MAC			
W.P. of .25 MAC			
B.L. of .25 MAC			

TABLE III. (CONTINUED)

MODEL COMPONENT: CANARD (C₁)GENERAL DESCRIPTION: 0.002456 SCALE CLIPPED DELTA SURFACE, WITH A
60° LEADING EDGE SWEEP BACK ANGLE AND A 5 PERCENT BICONVEX AIRFOILDRAWING NUMBER: 1198-40/41

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> <u>FT/FT²</u>	<u>MODEL SCALE</u> <u>IN/IN²</u>
Area (Exp.)	<u>900.30</u>	<u>0.7820</u>
Span (equivalent)	<u>36.78</u>	<u>1.084</u>
Inb'd equivalent chord	<u>40.818</u>	<u>1.203</u>
Outb'd equivalent chord	<u>8.17</u>	<u>0.241</u>
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	<u>1/1</u>	<u>1/1</u>
At Outb'd equiv. chord	<u></u>	<u></u>
Sweep Back Angles, degrees		
Leading Edge	<u>60°</u>	<u>60°</u>
Tailing Edge	<u>-2.37°</u>	<u>-2.37°</u>
Hingeline	<u>0.25 MAC</u>	<u>0.25 MAC</u>
Area Moment (Normal to hinge line)	<u>Variable</u>	<u>Variable</u>
Incidence Angle, Degrees	<u>0 to -60°</u>	<u>0 to -60°</u>
Airfoil Section	<u>5% BICNVX</u>	<u>5% BICNVX</u>
Fus. Sta. of 0.25 MAC	<u>1.448d aft of nose</u>	<u>1.448d aft of nose</u>

TABLE III. (CONTINUED)

Reproduced from
best available copy.MODEL COMPONENT: VERTICAL STABILIZER (V₁)GENERAL DESCRIPTION: 0.002456 SCALE TAIL WITH 40-DEGREE LEADING EDGE SWEEPANGLE - MOUNTED ON CENTERLINE BOOSTERDRAWING NUMBER: 1198-47DIMENSIONS:FULL-SCALE
FT/FT²MODEL SCALE
IN/IN²TOTAL DATA

Area

Planform

Wetted

Span (equivalent)

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Toe-In Angle

Cent Angle

Sweep Back Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Wing Sta. 0.0)

Tip, (equivalent)

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section

Root

Tip

EXPOSED DATA

Area

Span, (equivalent)

Aspect Ratio

Taper Ratio

Chords

Root

Tip

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

TABLE III. (CONTINUED)

MODEL COMPONENT: WING TIP FINS (V₂)

GENERAL DESCRIPTION: 0.002456 SCALE SWEPT LEADING EDGE/TRAILING EDGE WING

TIP FINS

DRAWING NUMBER:

1198-36

DIMENSIONS:

FULL-SCALE
FT/FT²MODEL SCALE
IN/IN²TOTAL DATA

Area

Planform
Wetted

Span (equivalent)

Aspect Ratio

Rate of Taper

Taper Ratio

Dihedral Angle, degrees

Incidence Angle, degrees

Aerodynamic Twist, degrees

Toe-in Angle

Cant Angle (Roll Out)

Sweep Back Angles, degrees

Leading Edge

Trailing Edge

0.25 Element Line

Chords:

Root (Wing Sta. 0.0)

Tip, (equivalent)

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

Airfoil Section

Root

Tip

EXPOSED DATA

Area

Span, (equivalent)

Aspect Ratio

Taper Ratio

Chords

Root

Tip

MAC

Fus. Sta. of .25 MAC

W.P. of .25 MAC

B.L. of .25 MAC

TABLE III. (CONCLUDED)

MODEL COMPONENT: ORBITER - O₁

GENERAL DESCRIPTION: 0.002456 SCALE GRUMMAN G3-A ORBITER

DRAWING NUMBER: 1198-51

<u>DIMENSIONS:</u>	<u>FULL-SCALE</u> <u>FT/FT²</u>	<u>MODEL SCALE</u> <u>IN/IN²</u>
Area		
Span (equivalent)		2.99
Inb'd equivalent chord		
Outb'd equivalent chord		
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord		
At Outb'd equiv. chord		
Sweep Back Angles, degrees		
Leading Edge		
Tailing Edge		
Hingeline		
Area Moment (Normal to hinge line)		
Overall Length		5.44

TABLE IV.
INDEX OF MODEL FIGURES

<u>FIGURE NUMBER</u>	<u>TITLE</u>	<u>PAGE NUMBER</u>
1	Axis System	33
2	AR-1198 Body B_2	34
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4	AR-1198 Booster-Orbiter Configuration	36
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6	Wing, W_6	38
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8	Wing, W_9	40
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13	Configuration $B_2W_6O_1^1V_2$ Installed in Tunnel	45
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15	Configuration $W_9B_2V_1C_1^2$ TS ₈ Installed in Tunnel	47

TABLE V. INDEX OF DATA FIGURES

TITLE	PLOTTED COEFFICIENTS SCHEDULE	PAGES
Longitudinal Stability		
- B2	A	1
- W6B2V2	A	11
- W4B2V2	A	21
- W9B2V1	A	31
- W6B2	A	41
- B2C12	A	51
- W6B2C12V2	A	61
- W6HB2C12V2	A	71
- W9B2C12V1	A	81
- W4B2C12V2	A	91
- W6B2 ϕ 11C12V2	A	101
Lateral Directional Stability -		
- W6B2C12V2	B	111
- W6B2 ϕ 11C12V2	B	119
- W6HB2C12V2	B	127
- W6HB2C12	B	135
- W9B2V1	B	143

TABLE V. (CONTINUED)

Directional Stability	PLOTTED COEFFICIENTS SCHEDULE		PAGES
- W9B2C12V1	B	151	
- W9B2	B	159	
- W4B2V2	B	167	
- W4B2C12V2	B	175	
- W6B2	B	183	
- W6B2C12	B	191	
- W6B2 ϕ 11C12V2	B	199	
- W6HB2C12V2	B	207	
- W6HB2C12	B	215	
- W9B2V1	B	223	
- W9B2C12V1	B	231	
- W9B2	B	239	
- W4B2V2	B	247	
- W4B2C12V2	B	255	
- W6B2	B	263	
- W9B2V1	B	271	
- W9B2	B	279	
- W4B2V2	B	287	

TABLE 7. (CONTINUED)

TITLE	PLOTTED COEFFICIENTS		PAGE
SCHEDULE			
Lateral Directional Stability			
- W6B2	B		295
- W9B2V1	B		303
- W9B2	B		311
- W4B2V2	B		319
- W9B2V1	B		327
- W4B2V2	B		335
- W6B2D11C12V2	B		343
Lateral Directional Stability - Effect of Canards			
- B2C12	CANARD = -20. CANARD = -40.	B	351 359
- W6B2C12	CANARD = -20. CANARD = -40. CANARD = -60.	B	367 375 383
- W6B2C12V2	CANARD = -20. CANARD = -40. CANARD = -60.	B	391 399 407
- W6HB2C12V2	CANARD = -20. CANARD = -40. CANARD = -60.	B	415 423 431
- W6HB2C12	CANARD = -20. CANARD = -40. CANARD = -60.	B	439 447 455

TABLE V. (CONTINUED)

TITLE	PLOTTED COEFFICIENTS		PAGES
	SCHEDULE		
Lateral Directional Stability - Effect of Canards			
- W9B2C12V1	CANARD = -20. CANARD = -40.	B	463 471
- W4B2C12V2	CANARD = -20. CANARD = -40.	B	479 487
Effect of Trip Strips		B	495
		A	503
Effect of Max Fillets in Canards		A	513
Longitudinal Stability at Alpha = 0. Degrees		C	523
Lateral Directional Stability at Beta = 0. Degrees		D	558
Longitudinal Stability - Effect of Canards			
- W6B2C12V2		A	602
- W4B2C12V2		A	652
- B2C12		A	712
- W9B2C12V1		A	732
- W6B2C12V2		A	772
Control Effectiveness		A	782
Aileron Effectiveness		E	842
		F	866

TABLE V. (CONCLUDED)

TITLE	PIOTTED COEFFICIENTS SCHEDULE	PAGES
Eleven Effectiveness		
- W6BEV2	E	878
- W6BEC12V2	E	884
Effect of Wing Configuration - Longitudinal Stability	A	890

PIOTTED COEFFICIENTS SCHEDULE:

- (A) CN, CIM CAF, CAB, CA, CL, CPBL, DCIM/DCN vs. α
 CIM vs. CN, CL vs. CDF
- (B) CY, CYN, CBL, CA, CAF, CAB, DCYN/DCY vs. β
 CYN vs. CY
- (C) CNAF \emptyset , CIMAF \emptyset , CNAF \emptyset , CMAF \emptyset , CF/DL, CAF \emptyset , CAFAF \emptyset vs. MACH
- (D) CF/D2, DCY/DB, DCYN/DB, DCBL/DB vs. MACH
- (E) DCN, DCIM, DCA, DCAF, DCAB, DCL vs. α
- (F) DCY, DCYN, DCBL vs. α

MODEL FIGURES

)

- Notes:
1. Positive directions of force coefficients moment coefficients, and angles are indicated by arrows.
 2. For clarity, origins of wind and stability axes have been displaced from the center of gravity.

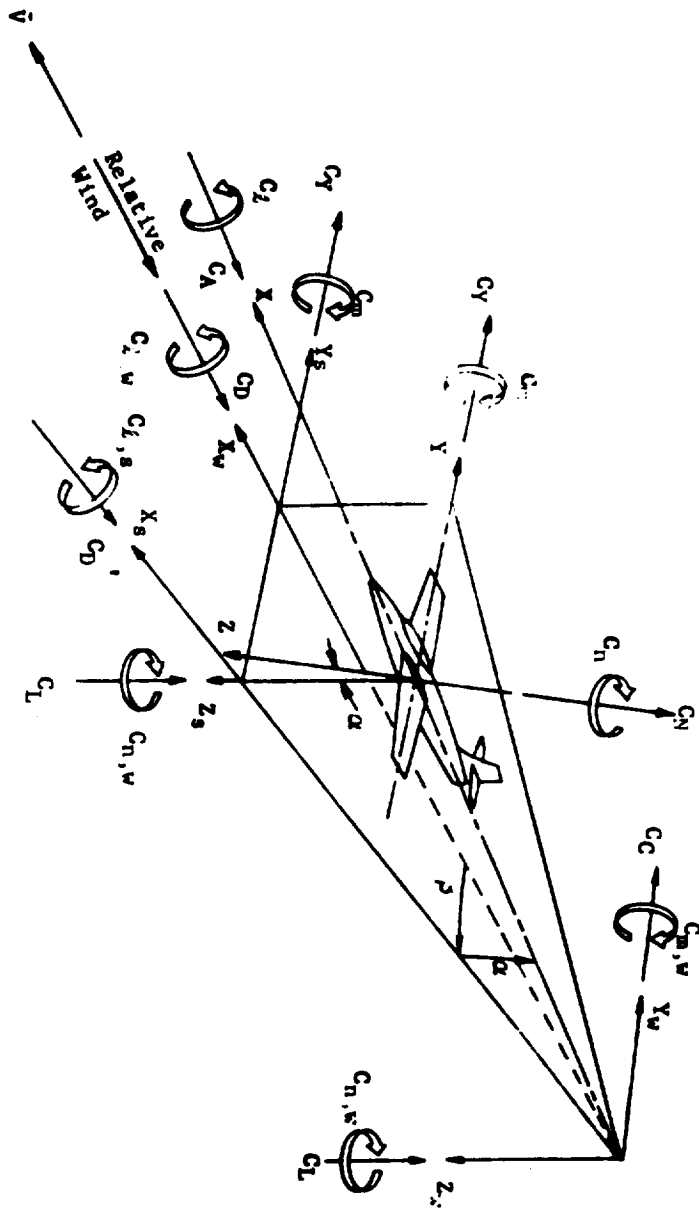
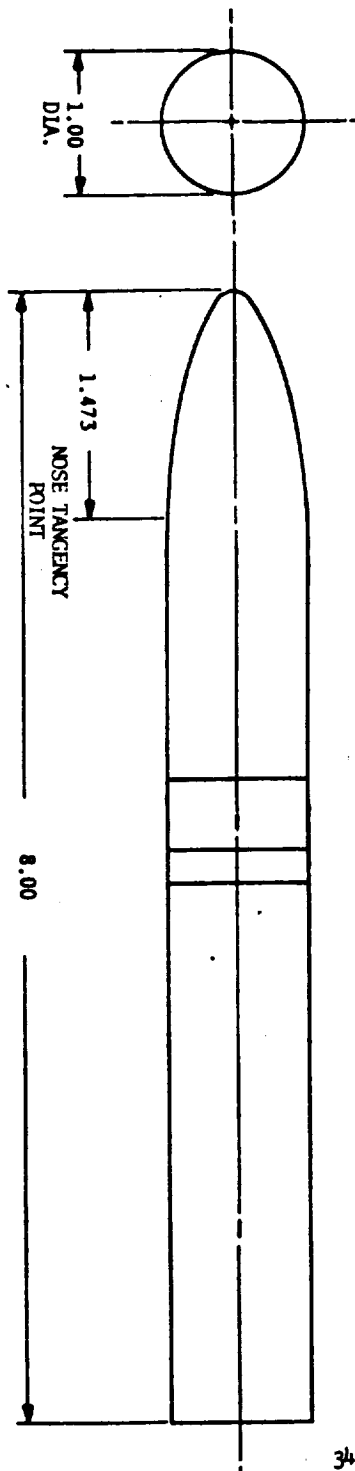
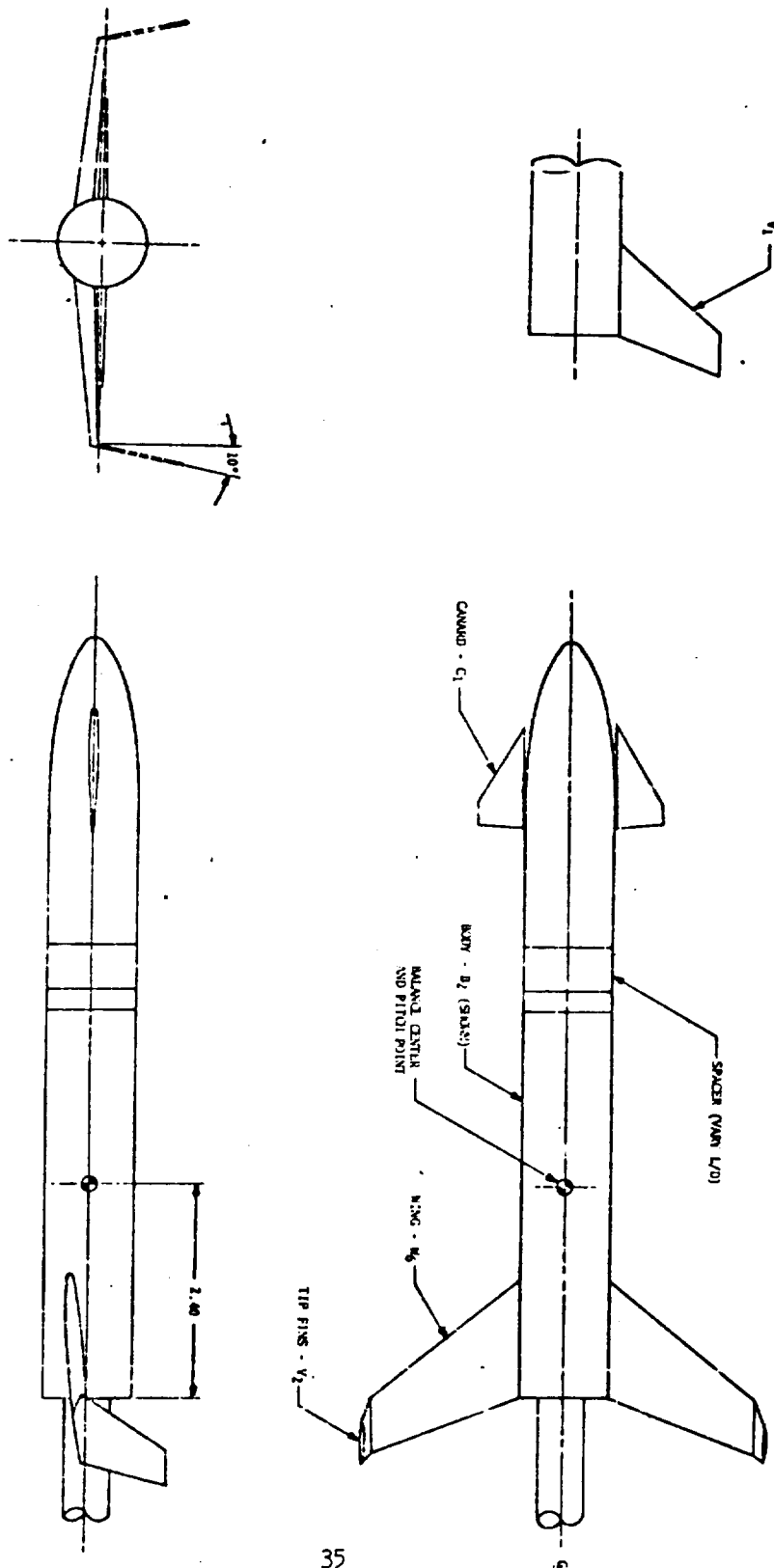


Figure 1. Axis systems, showing direction and sense of force and moment coefficients, angle of attack, and sideslip angle



AR-1198 BODY B2

Figure 2. AR-1198 Body B₂



0.002456 Scale AR-1198 Booster Model

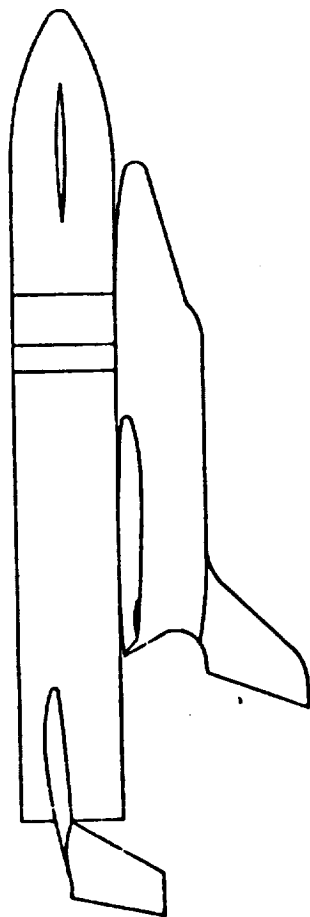
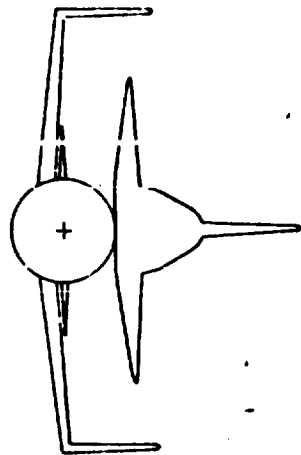
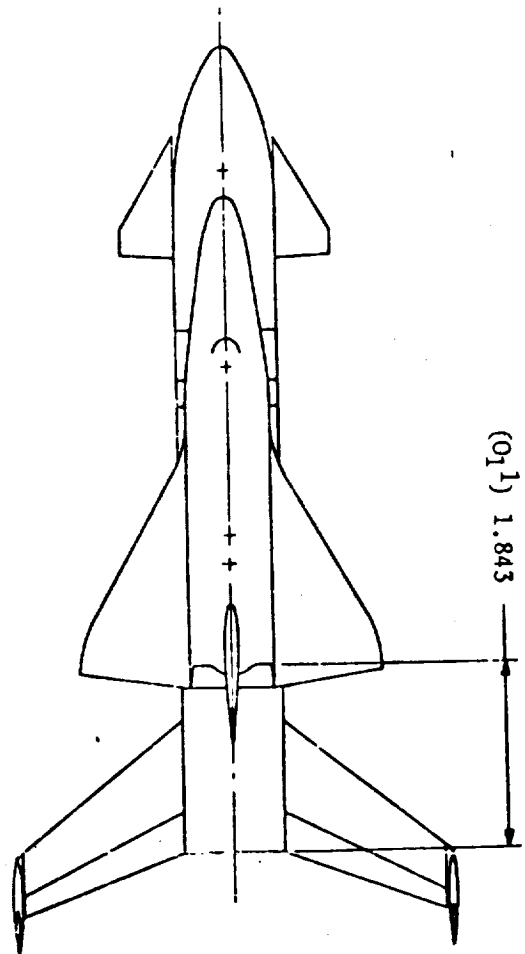


Figure 4. AR-1198 Booster-Orbiter Configuration

NOTE: ZERO ROLL-OUT
 SHOWN FOR CLARITY.

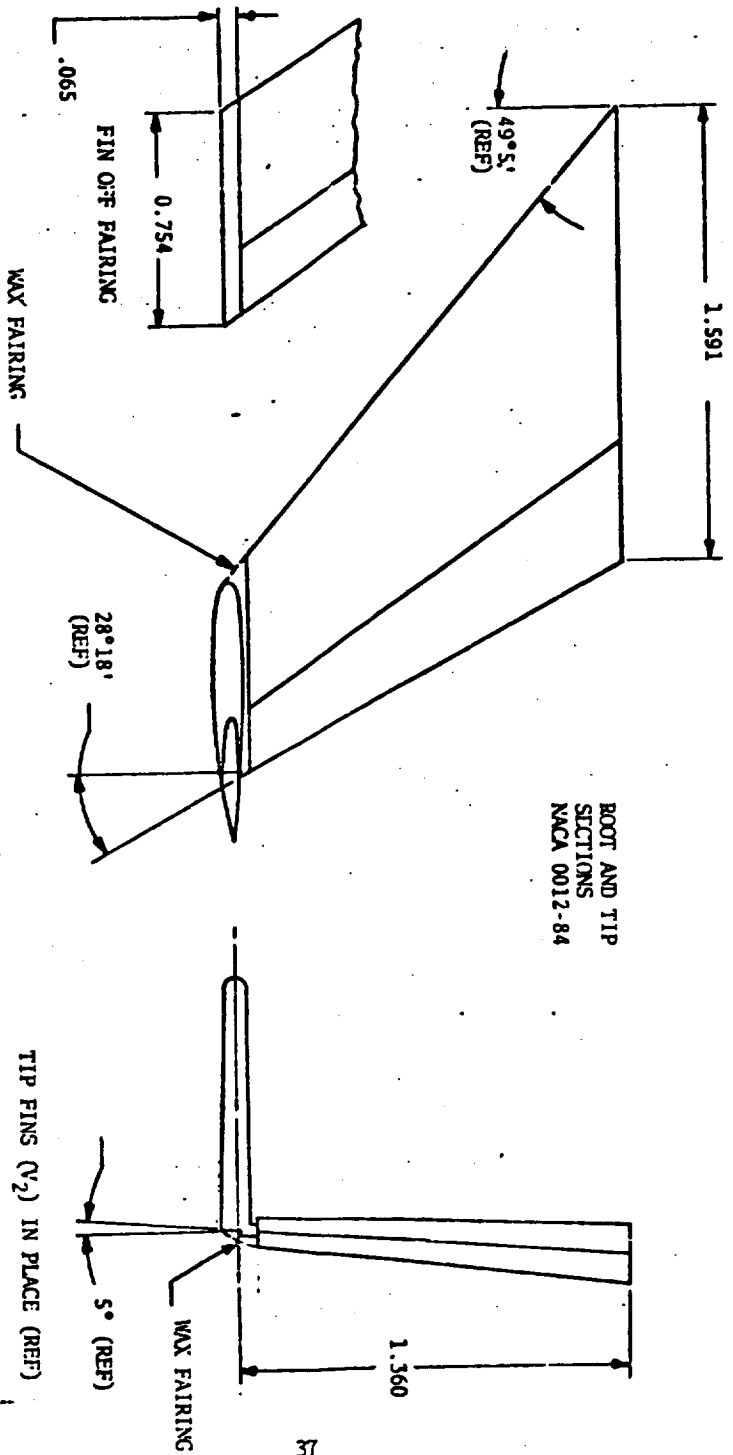


Figure 5. Wing, W₄

NOTE: ZERO ROLL-OUT
SHOWN FOR CLARITY.

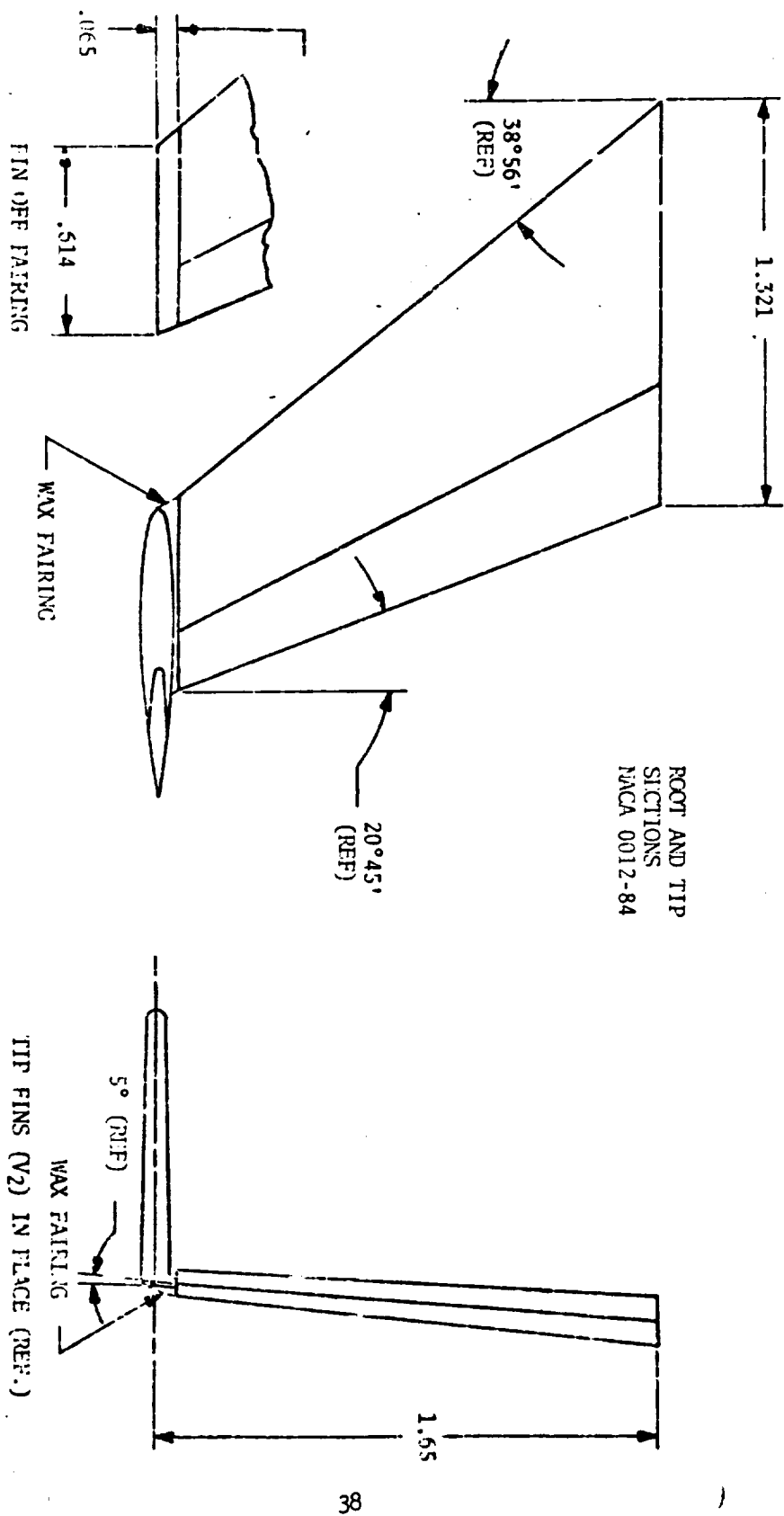


Figure 6. Wing, W6

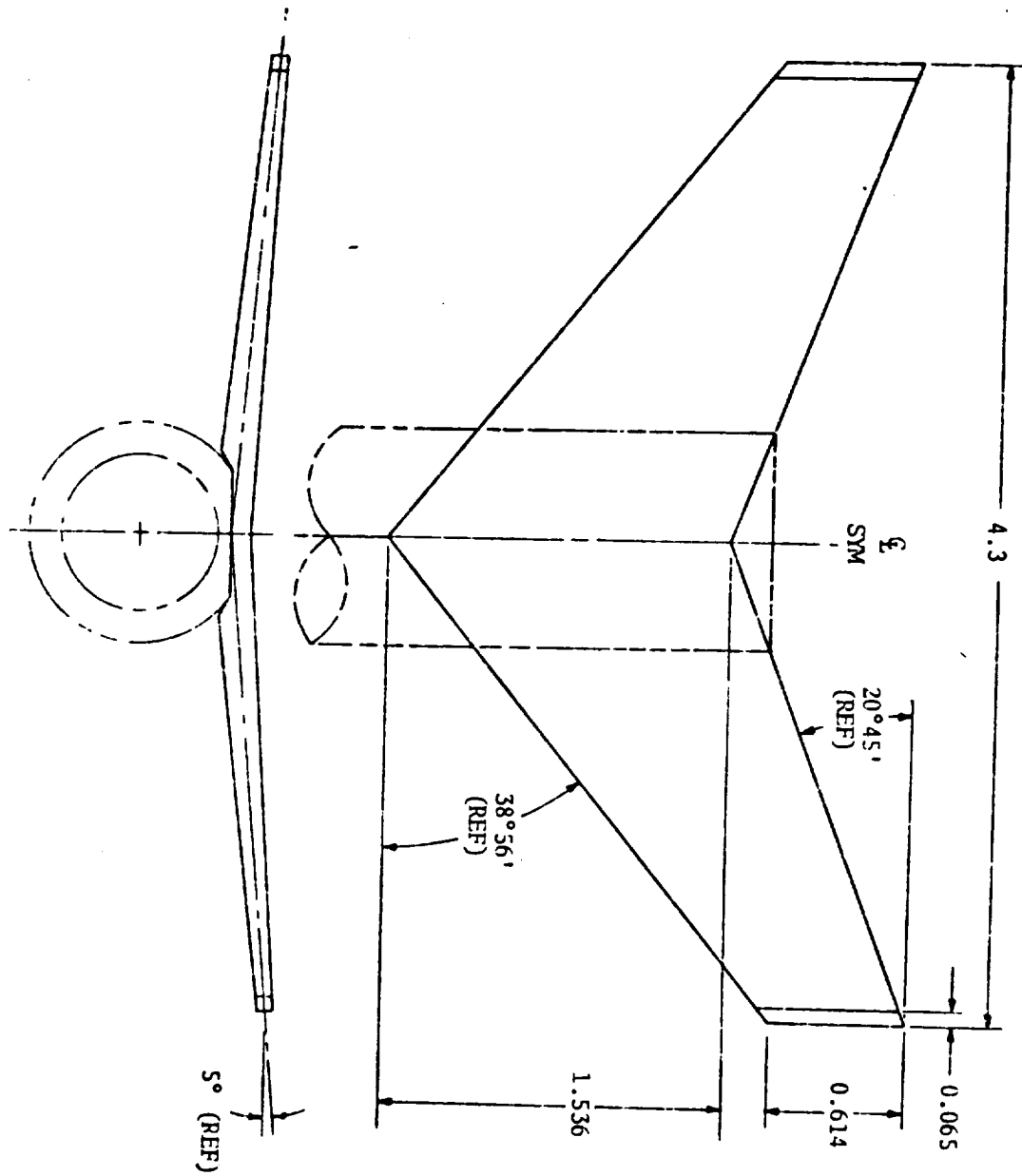


Figure 7. Wing, w_6^H

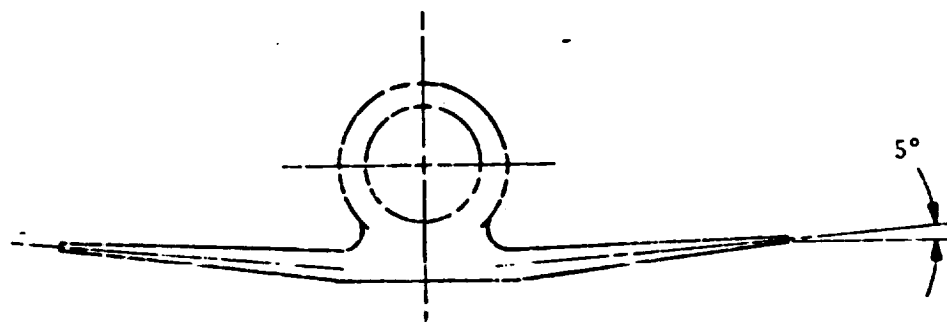
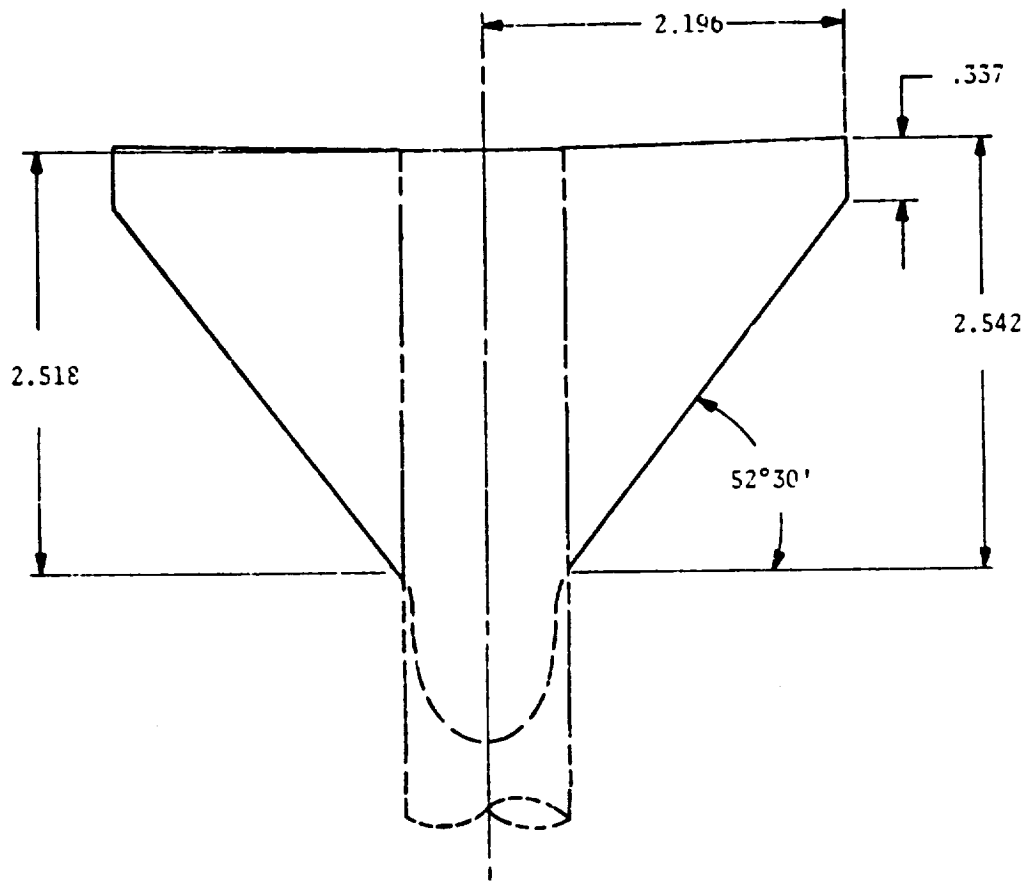


Figure 8. Wing, W_9

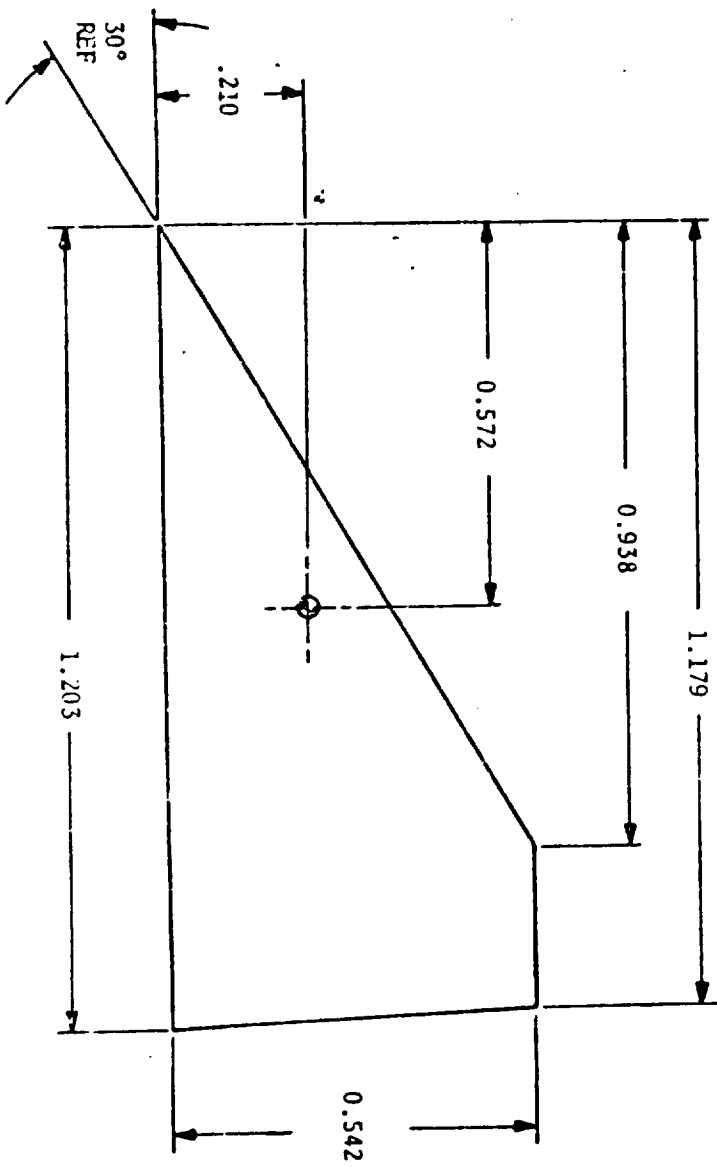


Figure 9. Canard, C_1

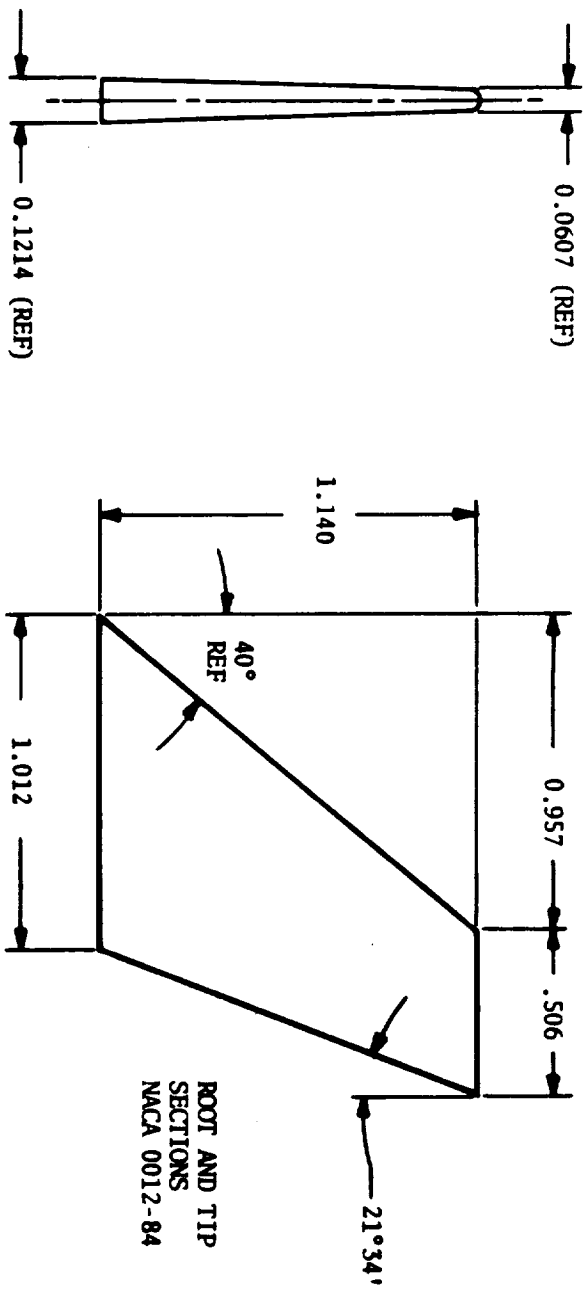


Figure 10. Vertical Tail, V₁

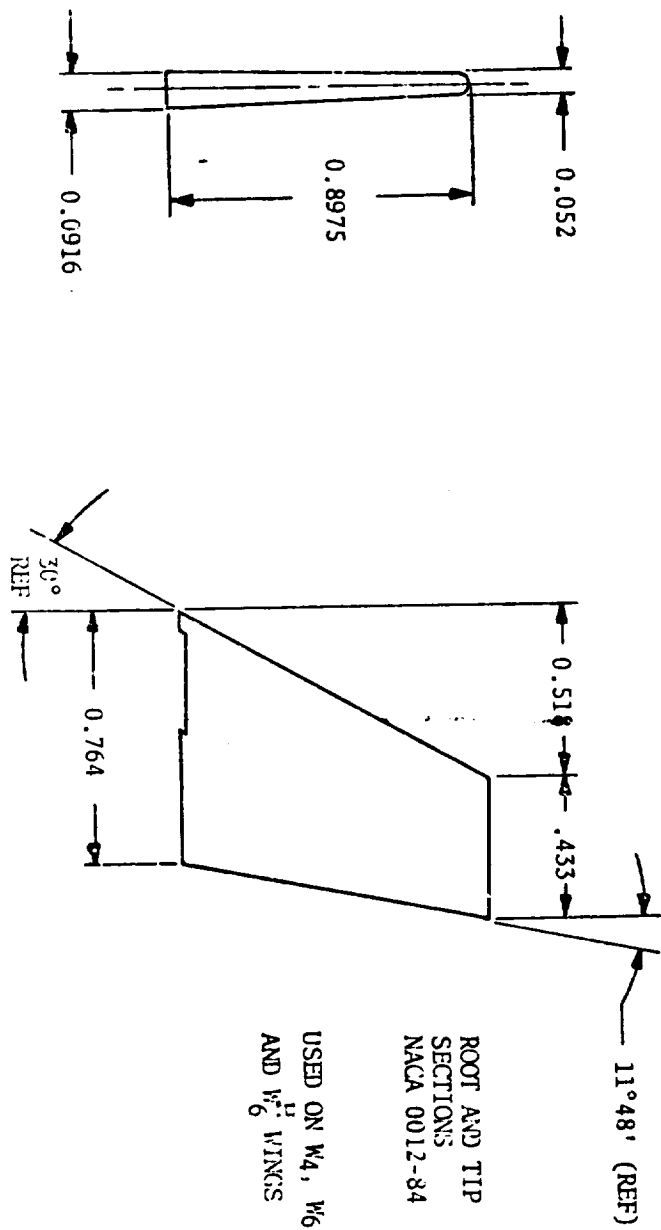


Figure 11. Wing Tip Fins, V₂

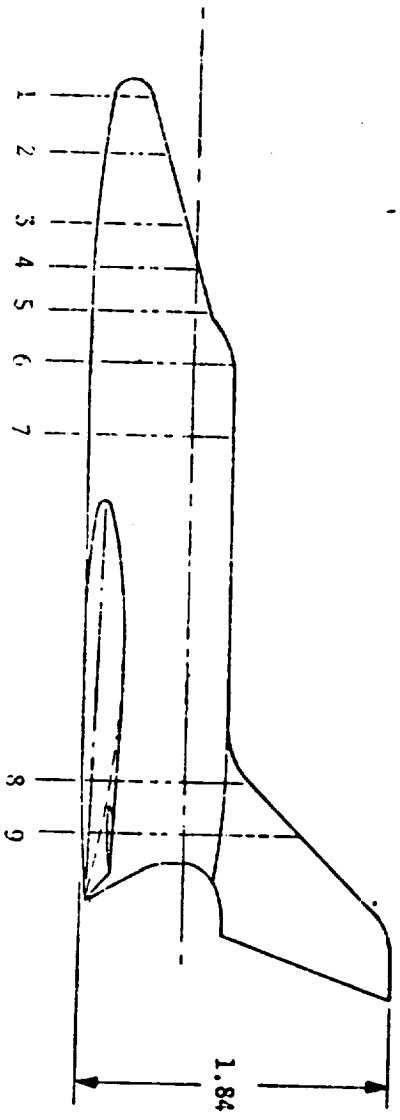
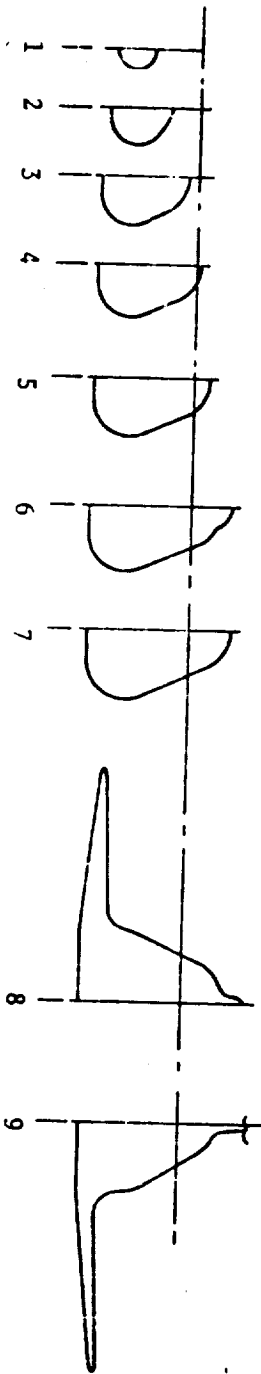
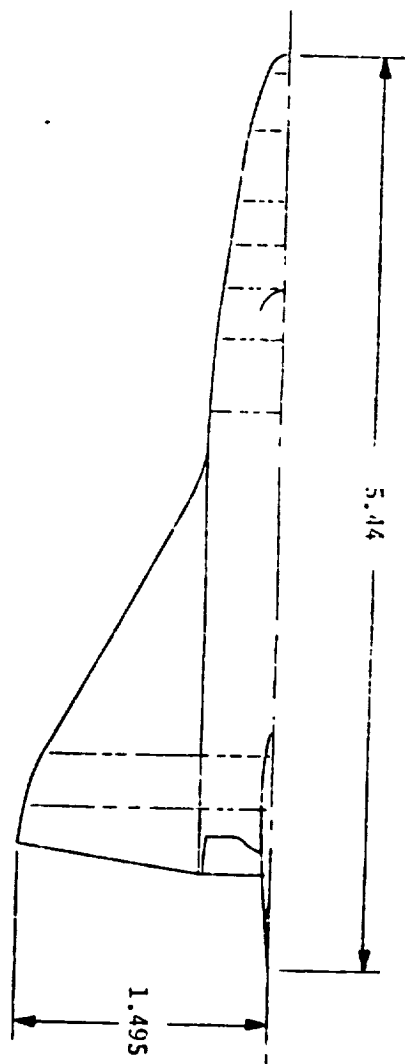
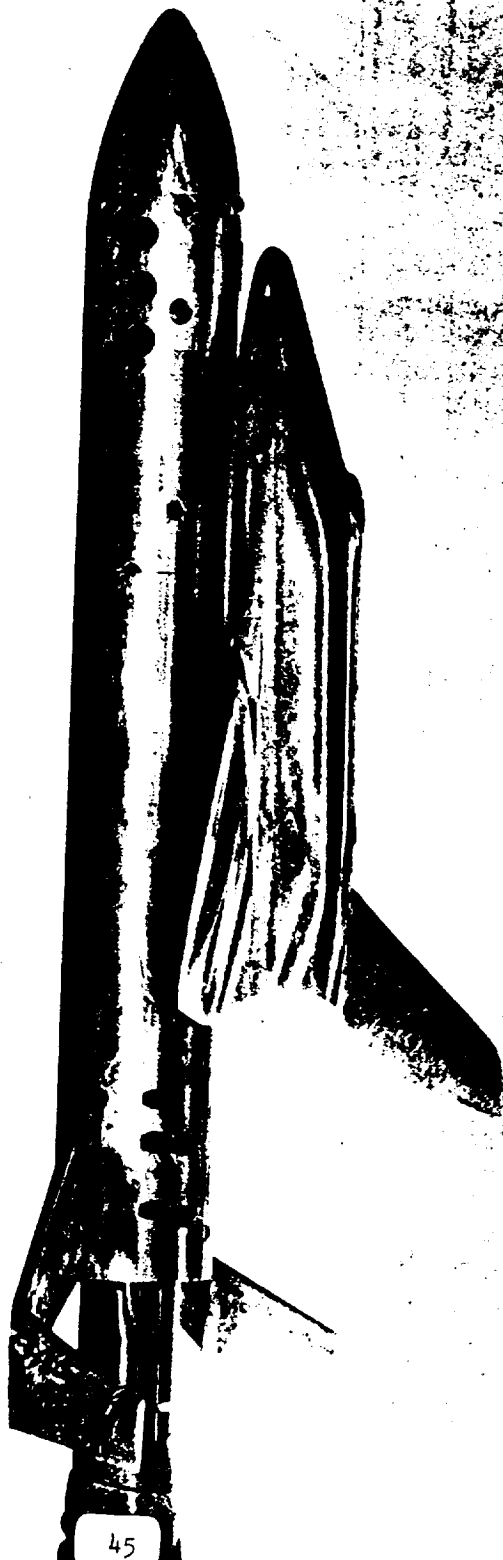
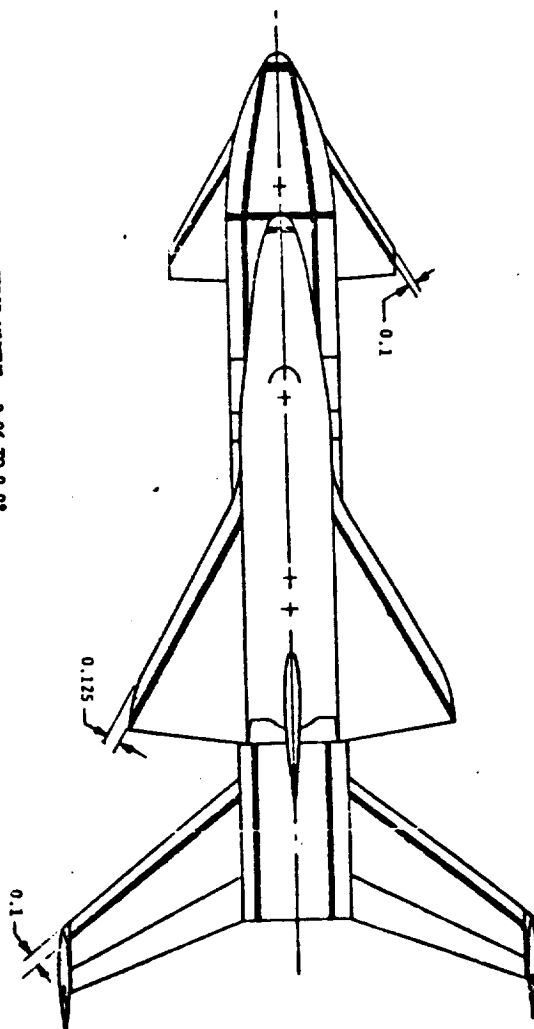
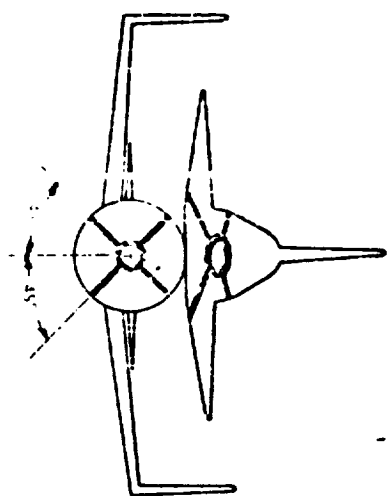


Figure 12. Grumman G3-A Orbiter Body



MSFC TWT 496
JULY 15, 1971
CONFIG

Figure 13. Configuration B₂W601V₂
Installed in Tunnel



ALL TRIP STRIP WIDTHS = 0.06 TO 0.08

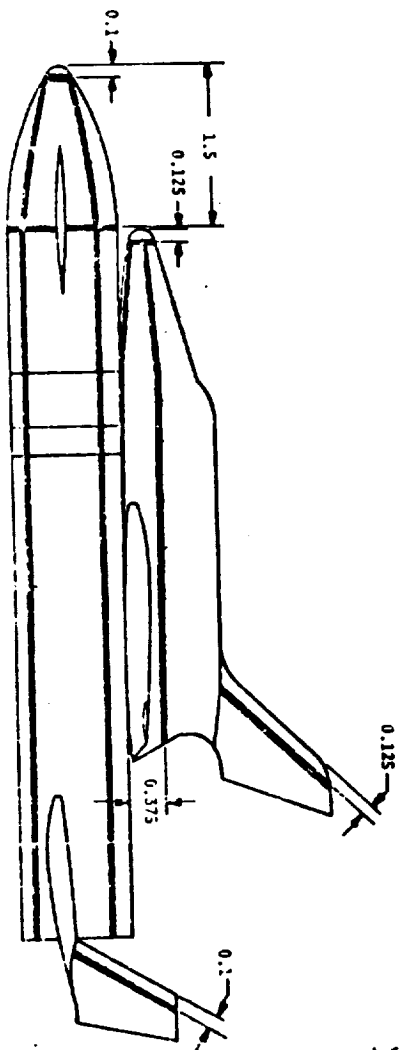


Figure 14. Trip Strip Chart - AR-1198 Booster

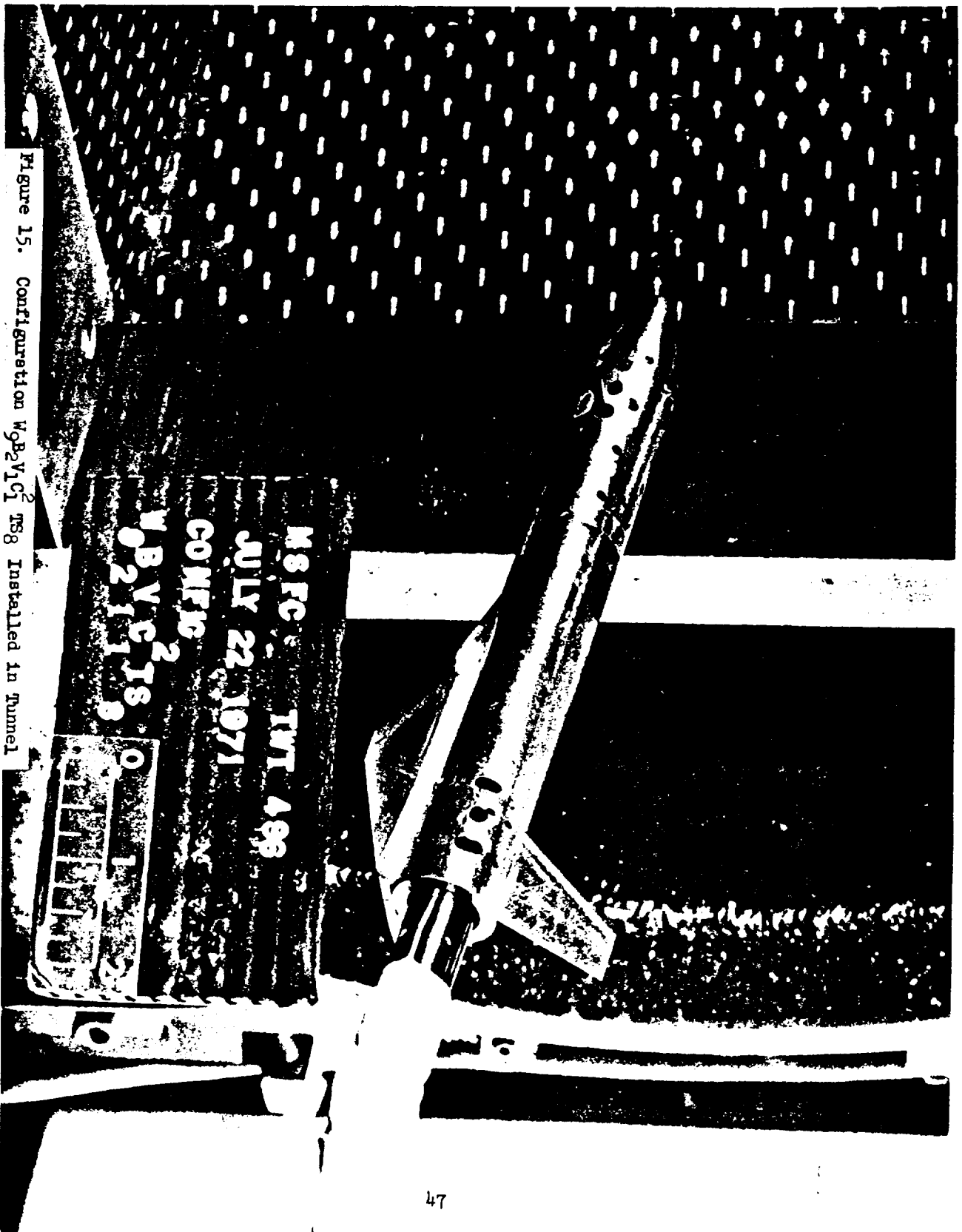
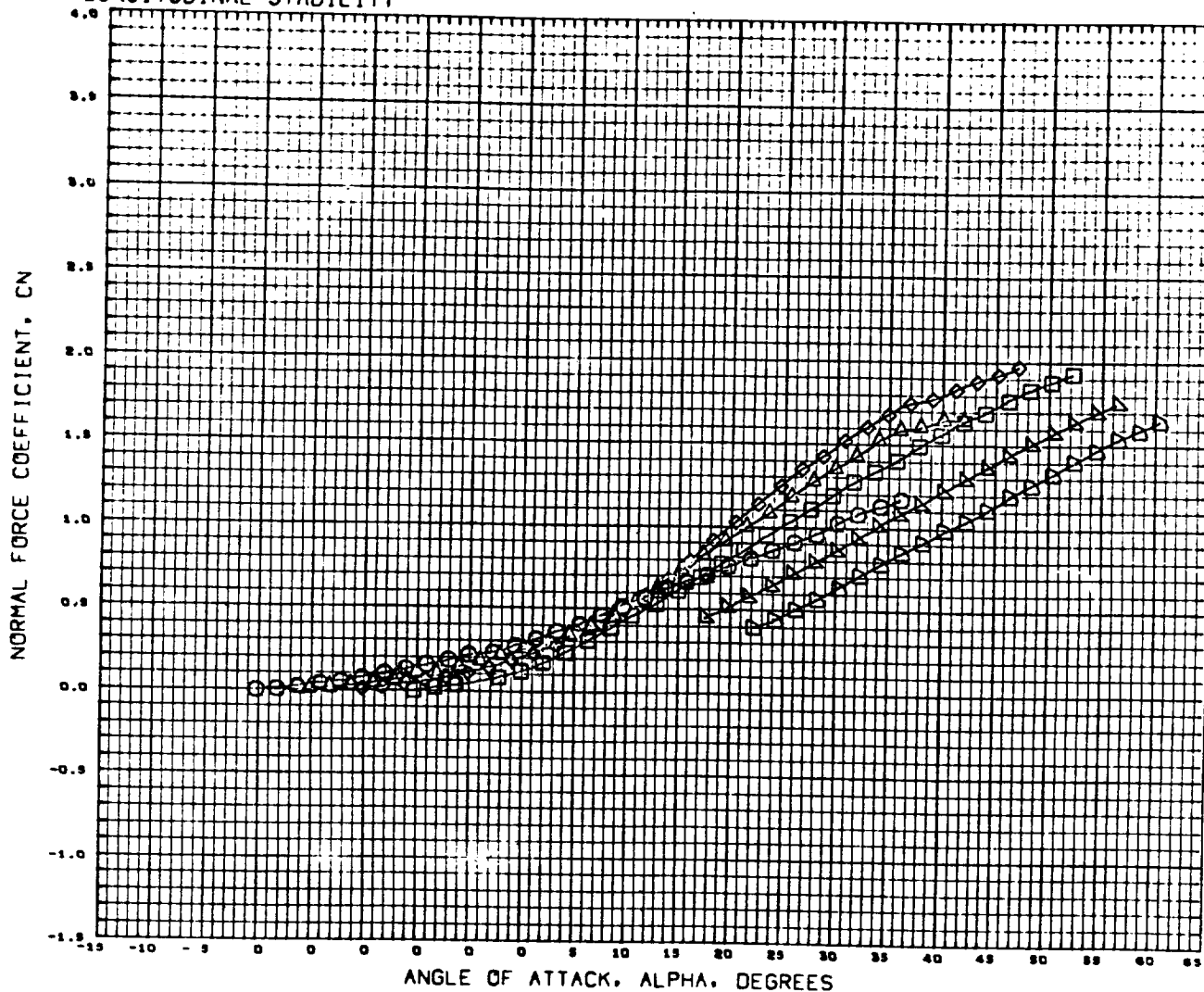


Figure 15. Configuration W₀B₂V₁C₁² TS8 Installed in Tunnel

D A T A F I G U R E S

Tabulations of the plotted data and corresponding
source data are available from SADSAC Operations.

LONGITUDINAL STABILITY



SYMBOL MACH
 ○ 0.999
 ◇ 0.896
 ◻ 1.202
 ▽ 1.937
 ◻ 3.490
 ▽ 4.939

BETA 0.000
 PARAMETRIC VALUES
 DATA HIST. CODE *E*G

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 QREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0029

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MODEL

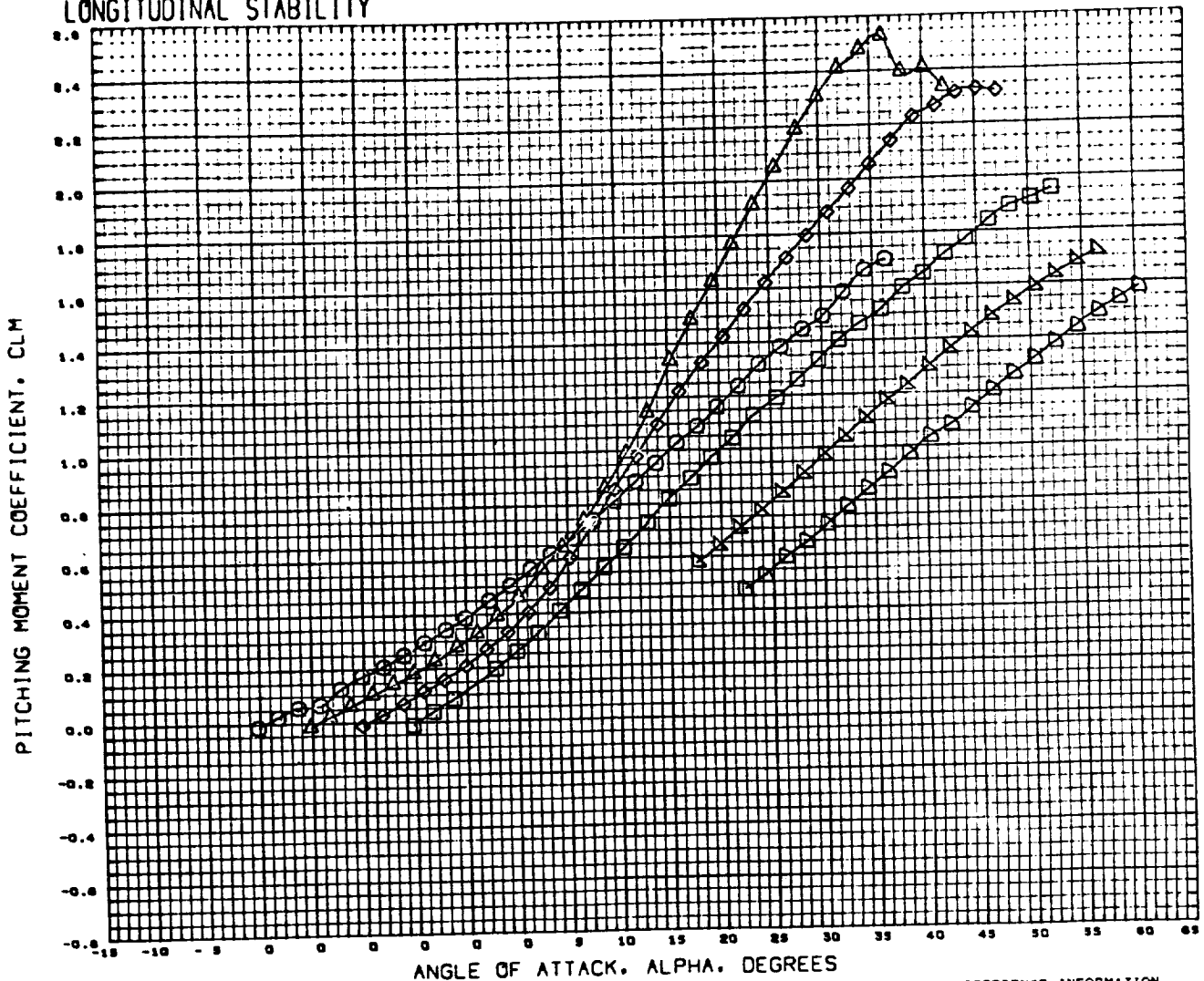
B2

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PAGE

1

LONGITUDINAL STABILITY



SYMBOL MACH
 0.599
 0.896
 1.202
 1.957
 3.450
 4.959
 DATA HIST. CODE *E*G

BETA
 0.000
 PARAMETRIC VALUES

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

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MODEL

B2

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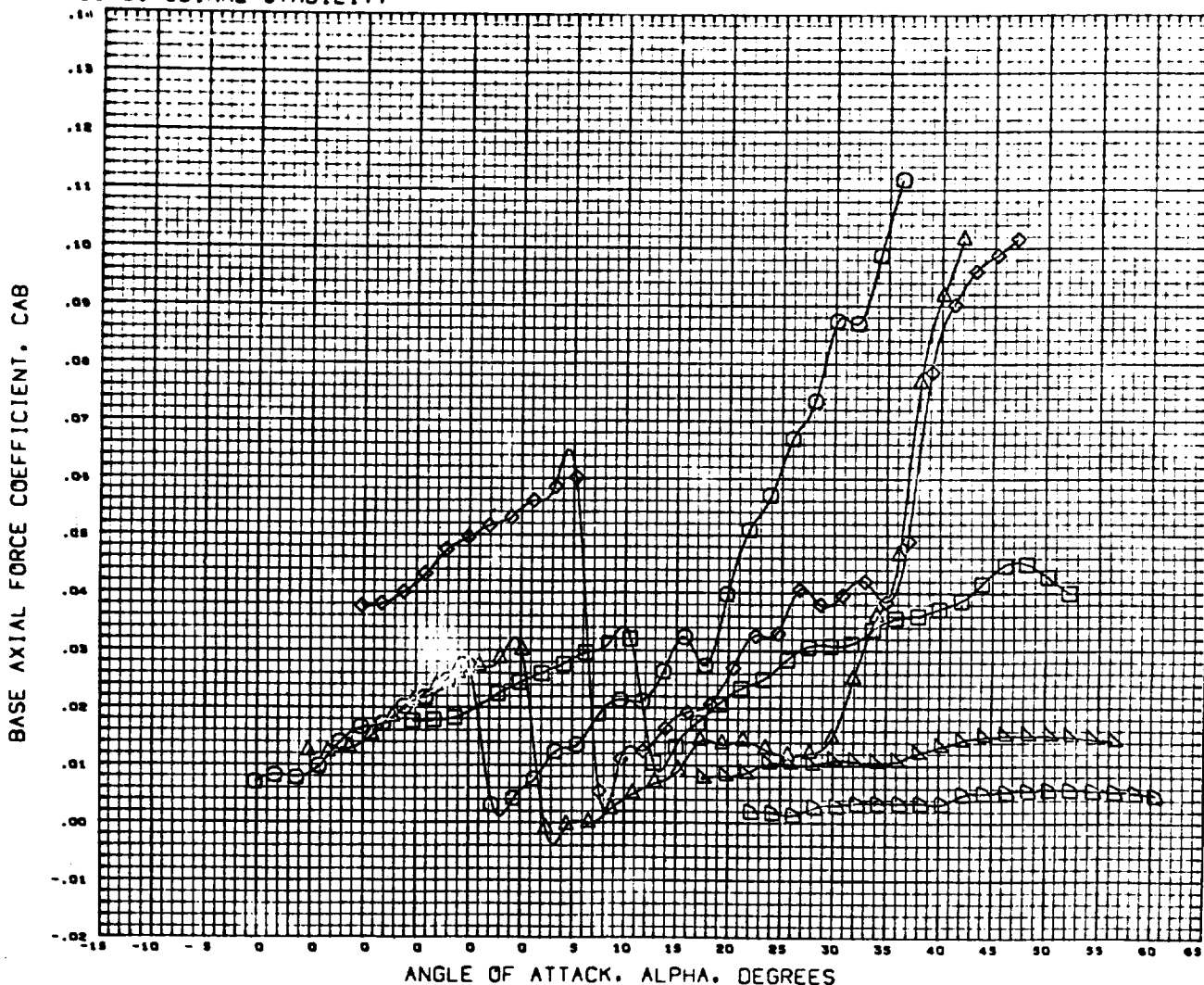
PAGE

2

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BREF	4.3000	IN.
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YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

3

LONGITUDINAL STABILITY



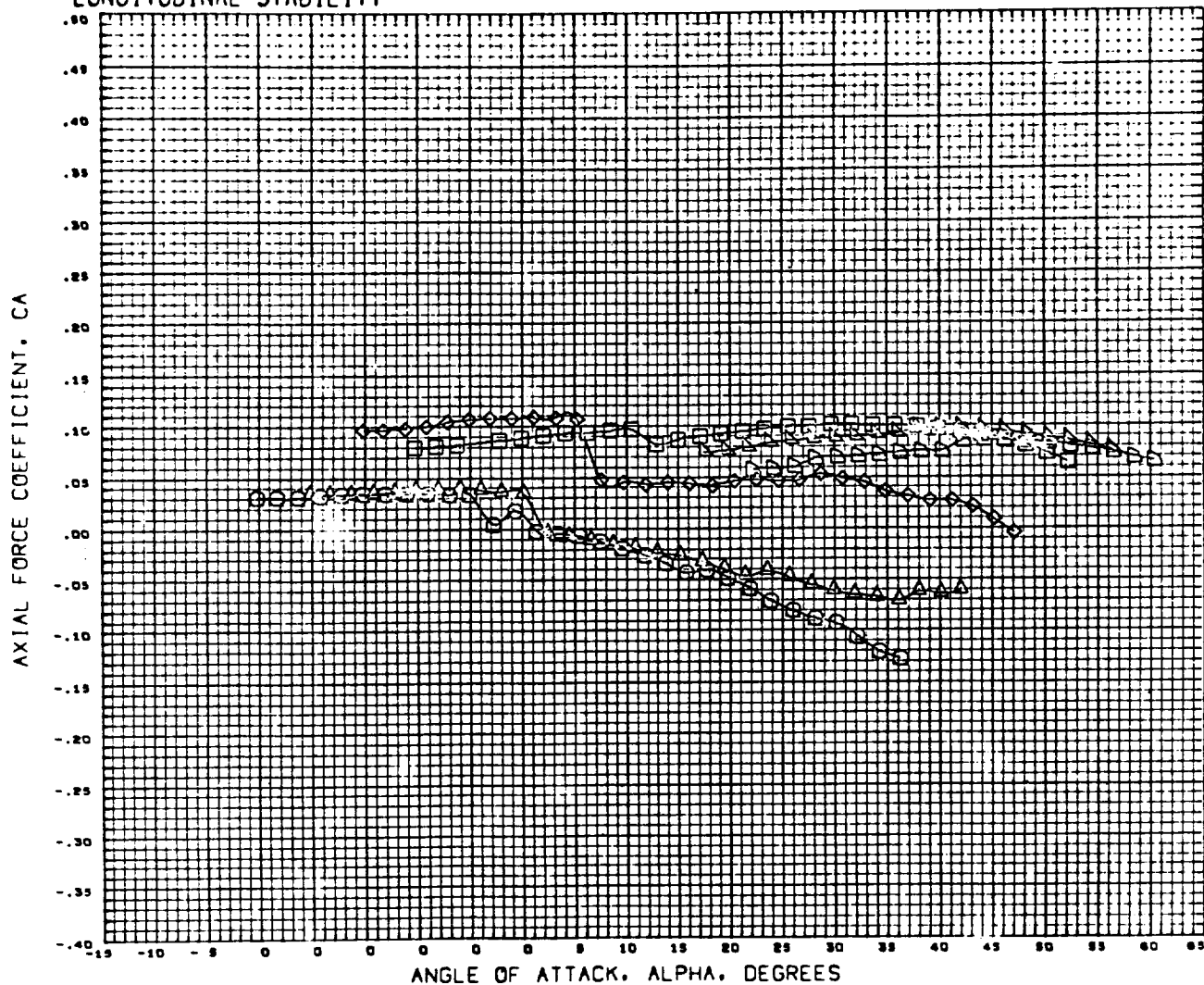
SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.999		0.000
◇	0.896		
□	1.202		
△	1.957		
▽	3.480		
○	4.959		
		DATA HIST. CODE	*E+6

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.599	0.000	
△	0.896		
◇	1.202		
◻	1.957		
◼	3.480		
◻	4.959		

DATA HIST. CODE *E*G

REFERENCE INFORMATION	
BREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
ZMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

M496-MSFC

AR11981-3

MODEL

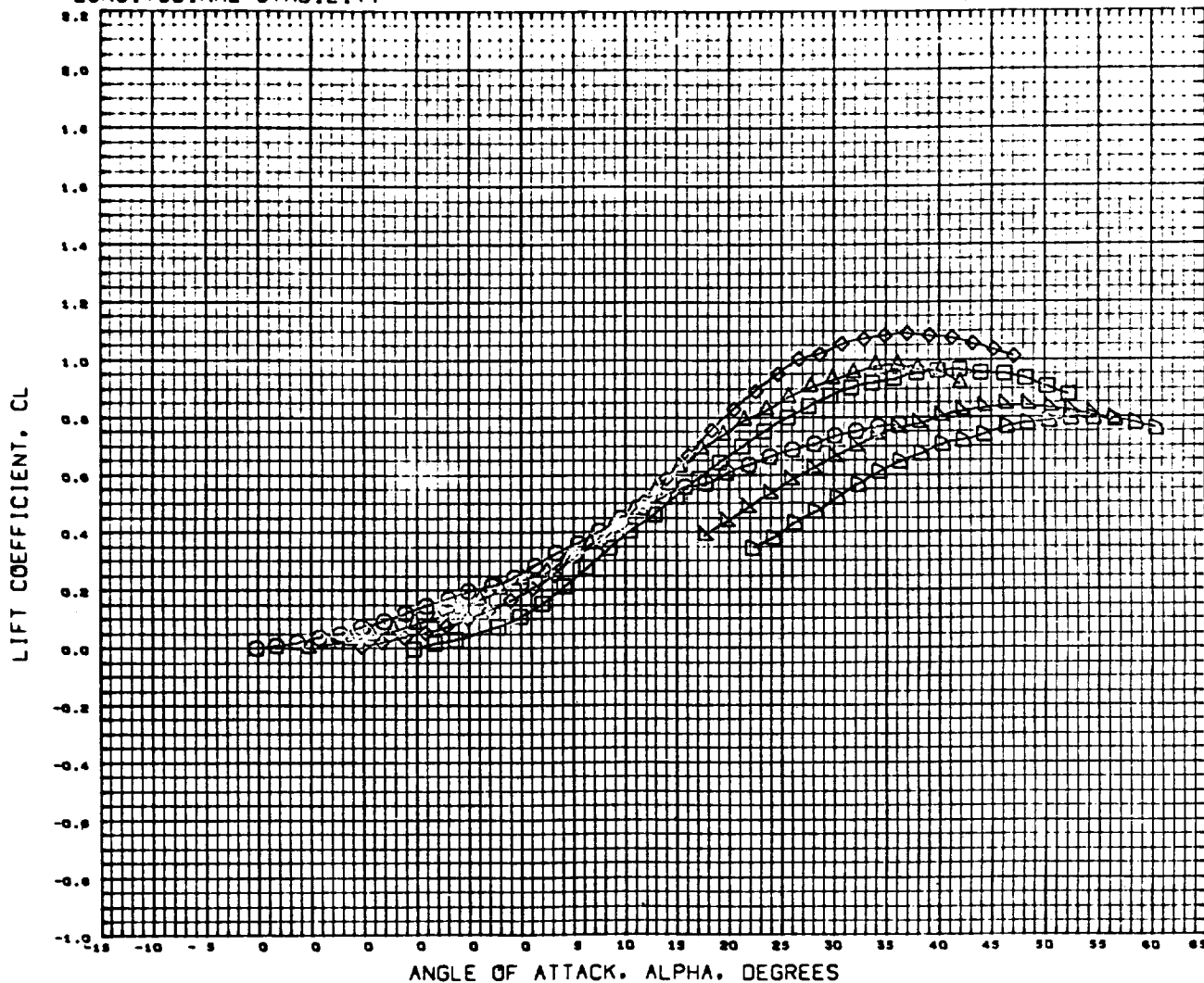
B2

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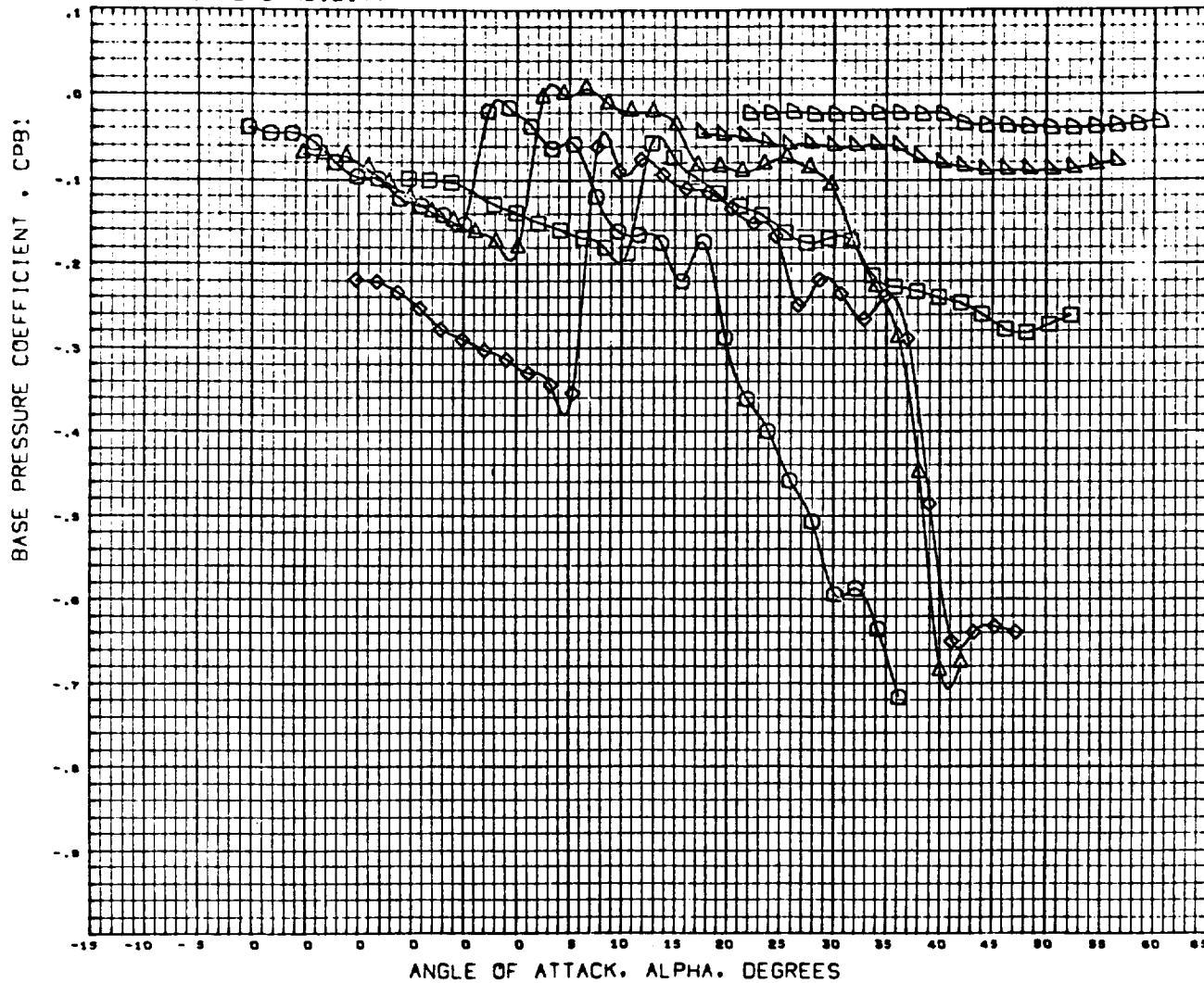
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LONGITUDINAL STABILITY



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◇	0.896				LREF	1.5360	IN.
□	1.202				BREF	4.3000	IN.
▽	1.937				XMRP	2.4000	IN.
◇	3.490				YMRP	0.0000	IN.
◇	4.939				ZMRP	0.0000	IN.
		DATA HIST. CODE	*E*G		SCALE	0.0025	
M496-MSFC	AR11981-3	MODEL	B2	(F3801X)	06 SEP 72	PAGE	6

LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.599		0.000
□	0.896		
△	1.202		
◇	1.957		
×	3.499		
	4.959	DATA HIST. CODE	0E+0

REFERENCE INFORMATION		
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LREF	1.9360	IN.
BREF	4.3000	IN.
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YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

M496-MSFC

AR11981-3

MODEL

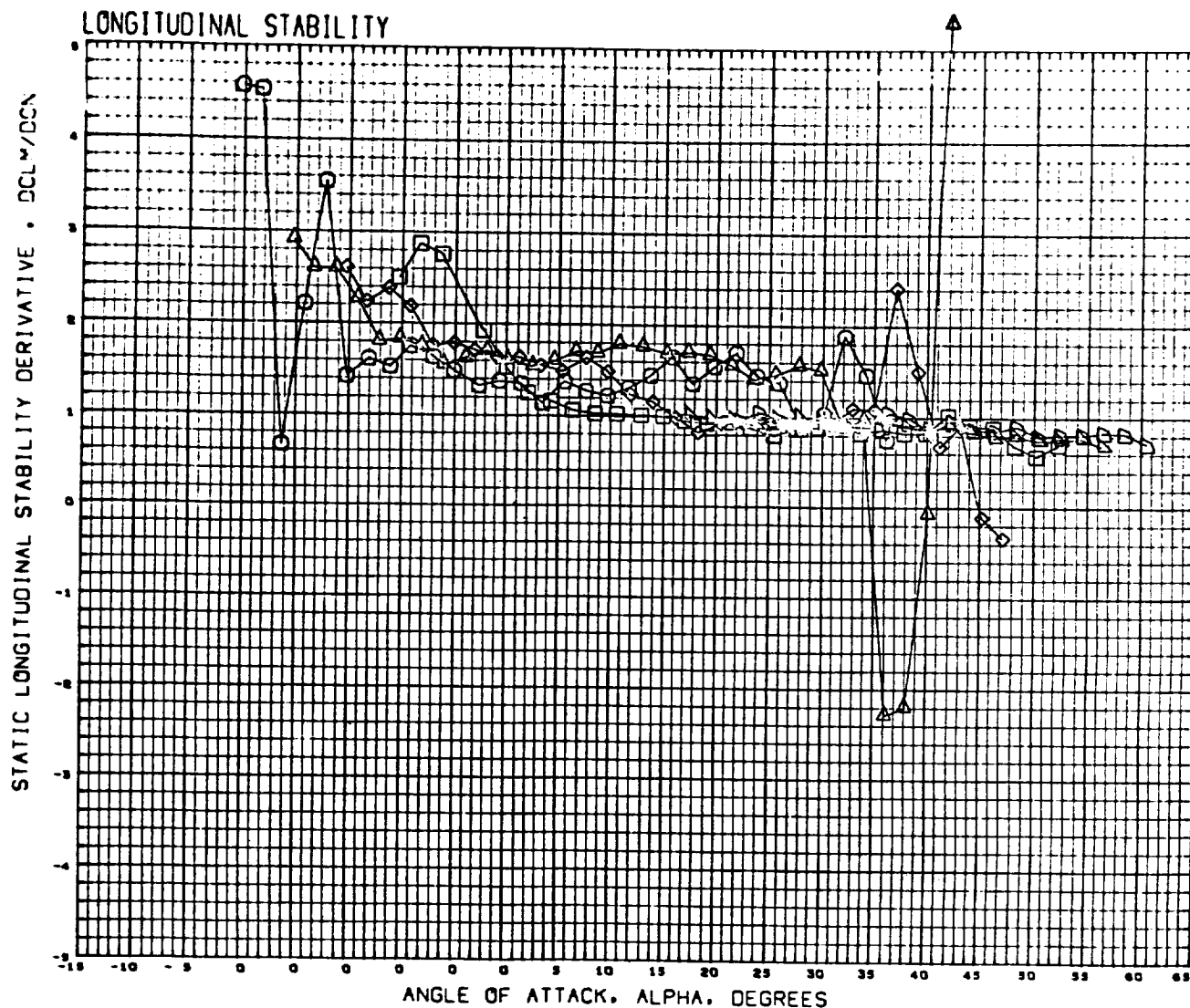
B2

(F3801X)

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SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.599		0.000
◇	0.896		
□	1.202		
△	1.937		
▽	3.440		
◇	4.999		

DATA HIST. CODE 4E96

REFERENCE INFORMATION		
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LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
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ZMRP	0.0000	IN.
SCALE	0.0023	

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MODEL

82

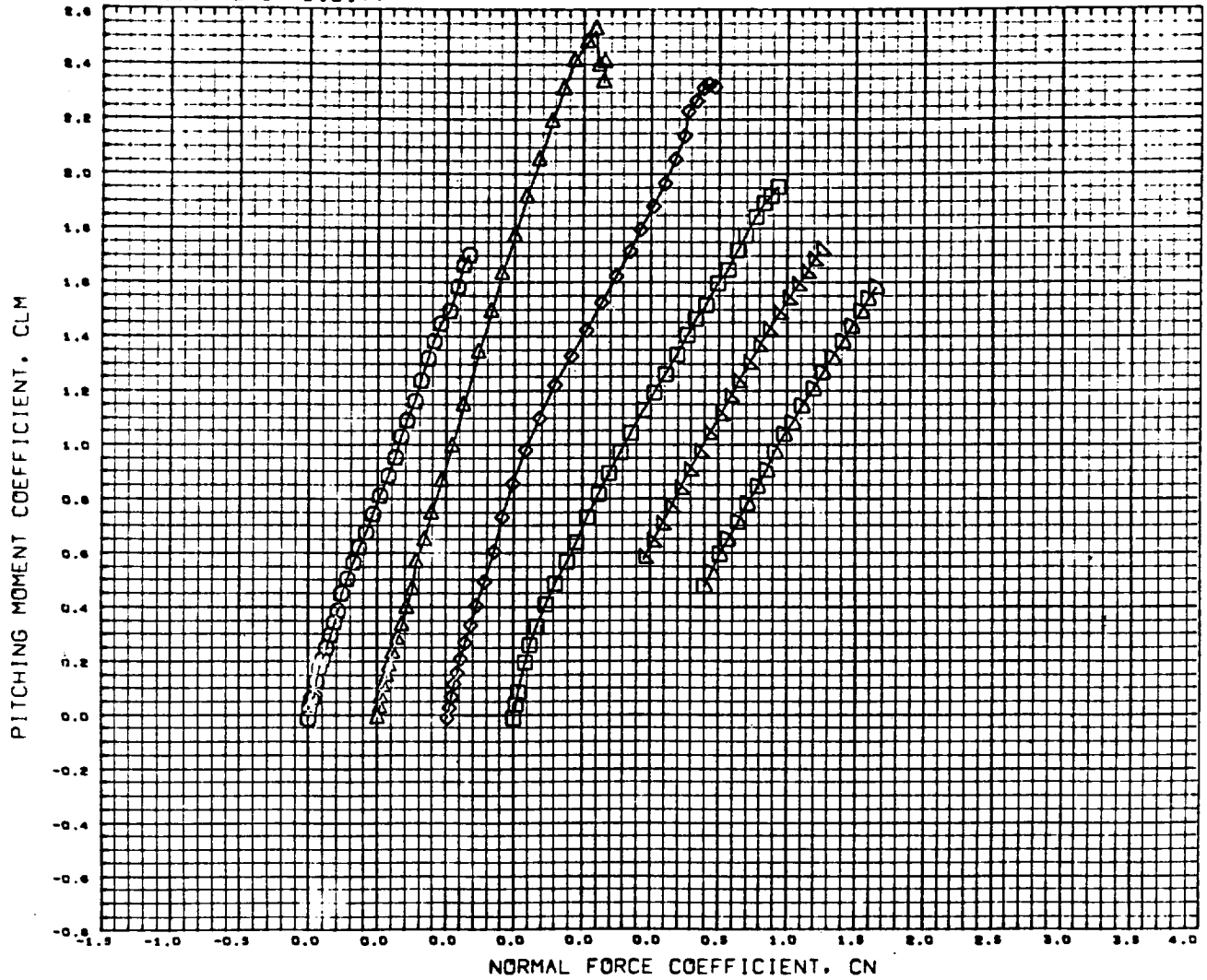
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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.599		0.000	SRFP 4.6225 SQ. IN.
△	0.896			LRFP 1.9360 IN.
□	1.202			BRFP 4.3000 IN.
◇	1.957			XRFP 2.4000 IN.
×	3.480			TRFP 0.0000 IN.
	4.959	DATA MIST. CODE	*E6G	SCALE 0.0025

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AR1198I-3

MODEL

B2

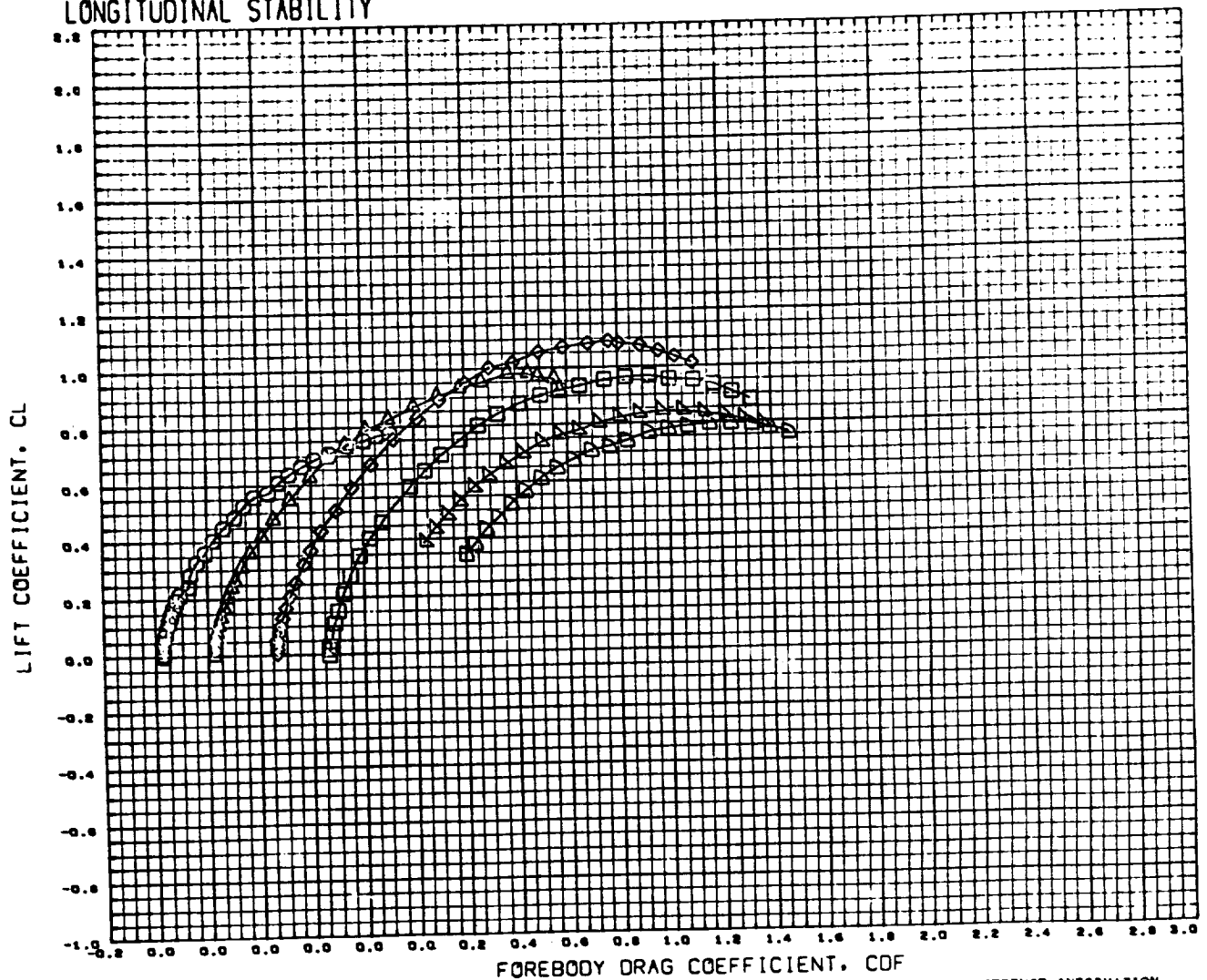
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LONGITUDINAL STABILITY



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◇	0.898			
△	1.202			
□	1.537			
▽	3.480			
◇	4.999			

DATA HIST. CODE *E*G

REFERENCE INFORMATION		
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BREF	4.3000	IN.
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ZMRP	0.0000	IN.
SCALE	0.0023	

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MODEL

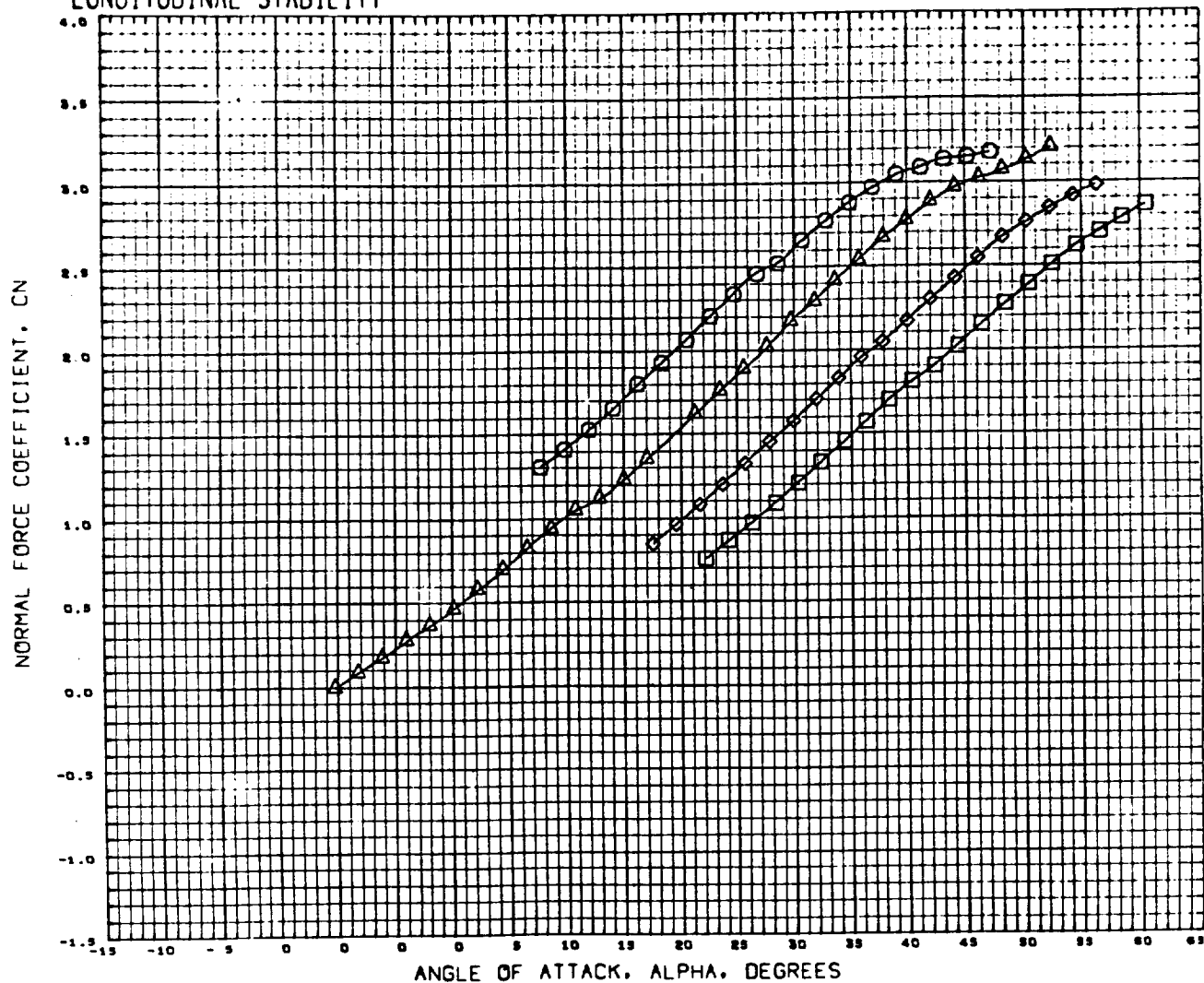
B2

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	DEL	ELEVTR
○	1.199	0.000	0.000	0.000
△	1.956	0.000	0.000	0.000
◇	3.480	0.000	0.000	0.000
□	4.959	0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 90. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
YNRP	2.4000 IN.
YNRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE 0246

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AR1198I-3

MODEL

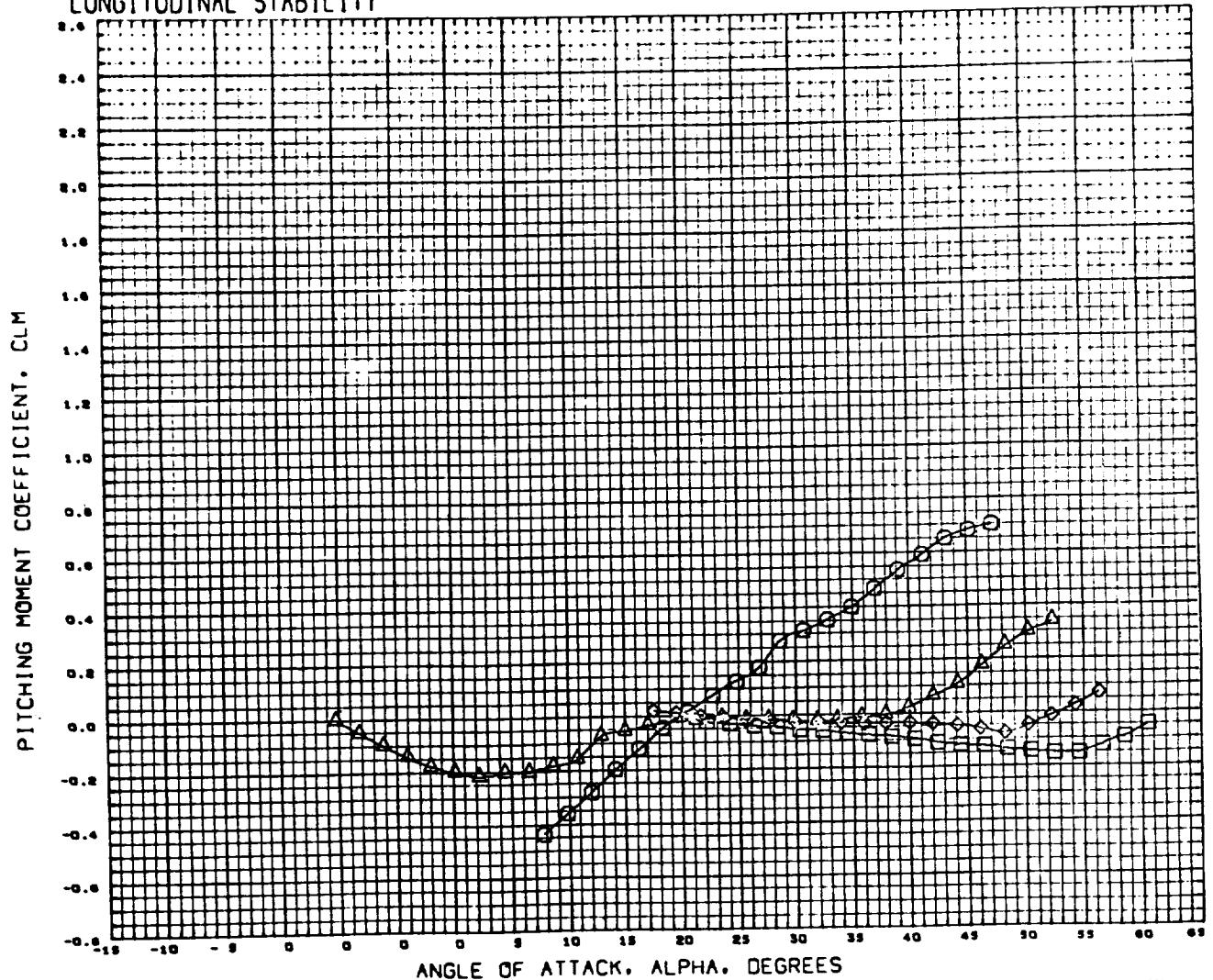
W6B2V2

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LONGITUDINAL STABILITY

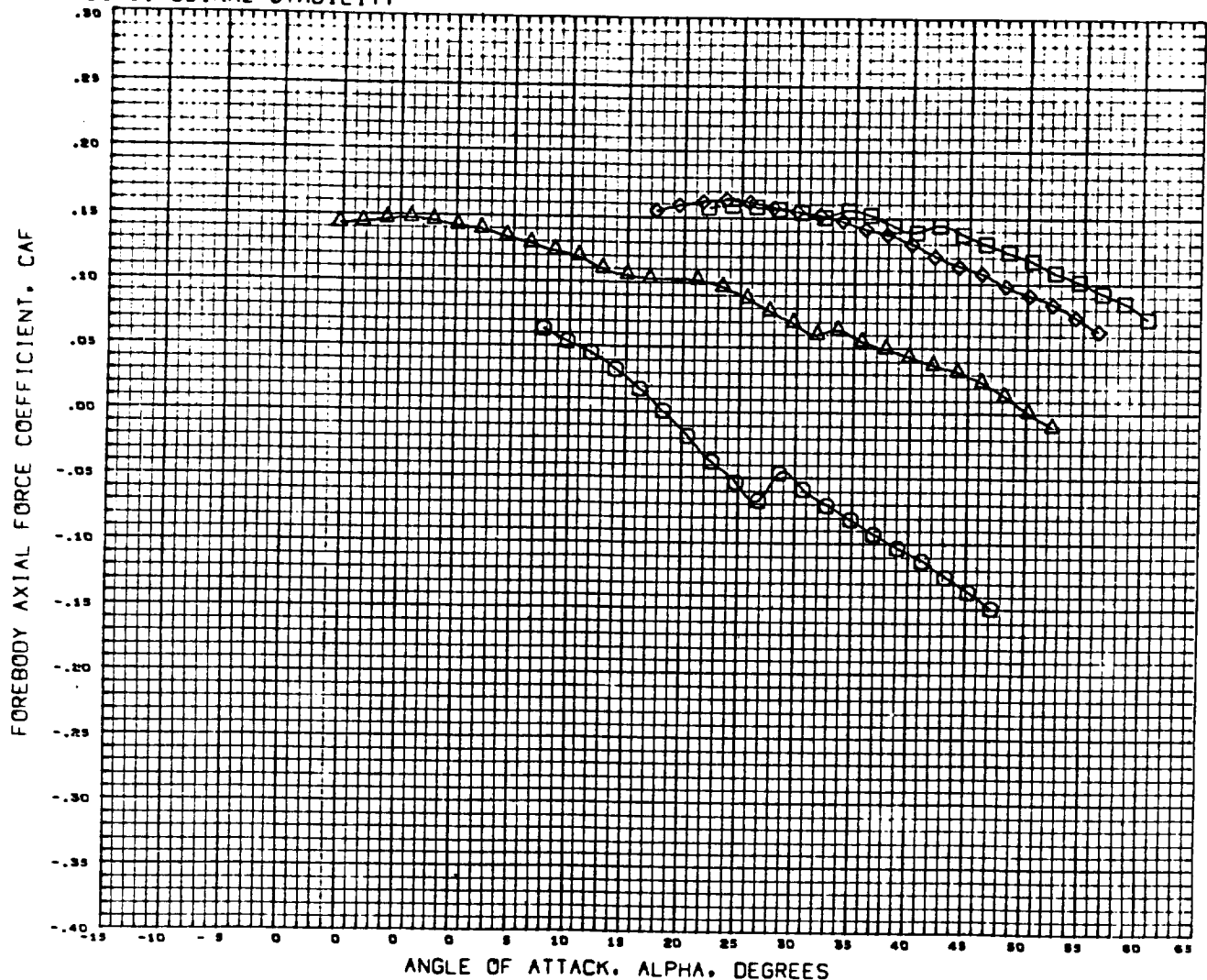


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△	1.956	0.000	OEL	0.000	ELEVTR	0.000		BREF	4.3000	IN.	
◇	3.480	0.000	AILRON	0.000				XMRP	2.4000	IN.	
□	4.959							YMRP	0.0000	IN.	
								ZMRP	0.0000	IN.	
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DATA HIST. CODE *E*G

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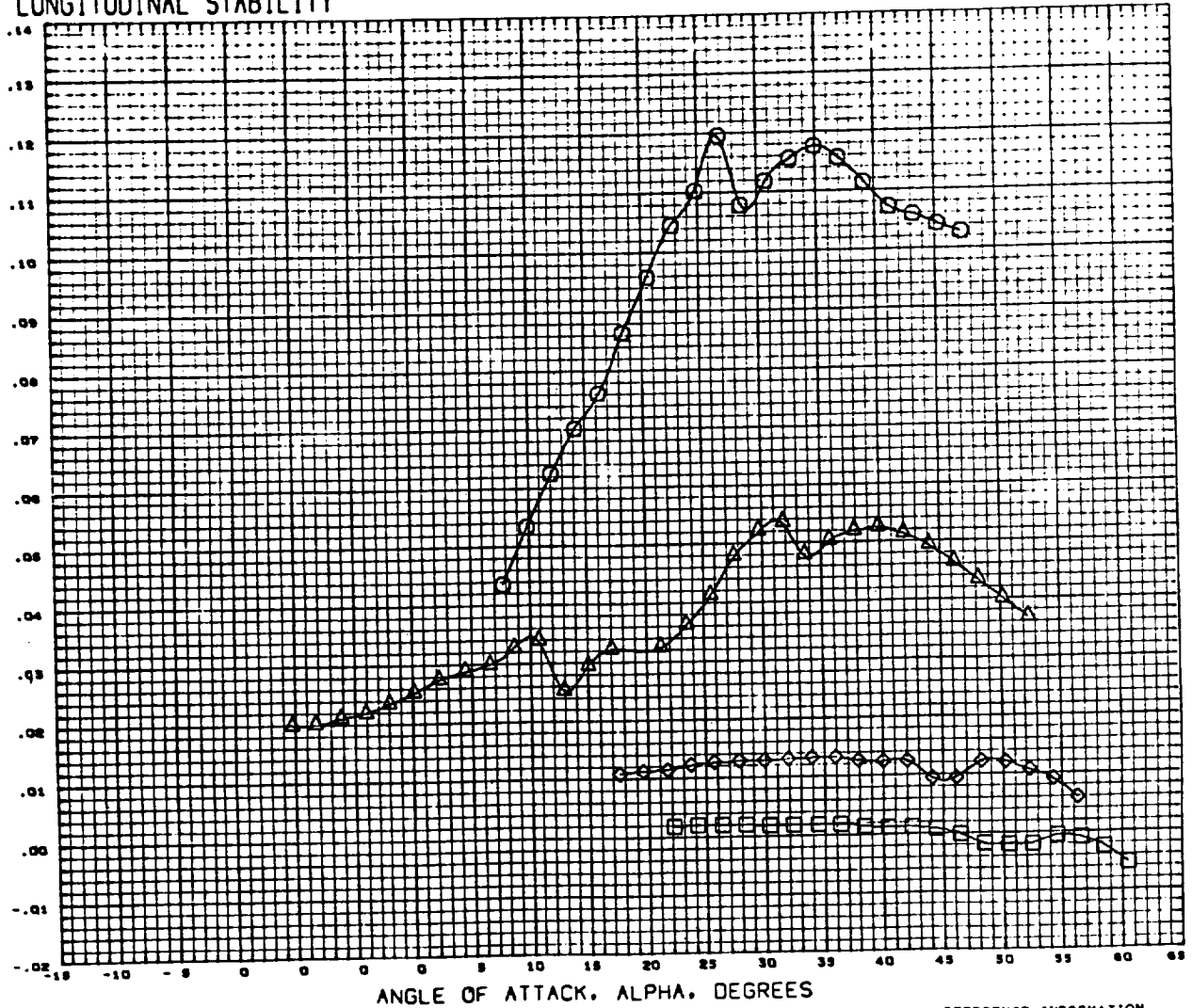
LONGITUDINAL STABILITY



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◇	3.480	ATLRON	0.000			BREF	4.3000 1N.
□	4.959					YHRP	2.4000 1N.
						YHRP	0.0000 1N.
						ZHRP	0.0000 1N.
						SCALE	0.0025

LONGITUDINAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.199	BETA	0.000	DEL	0.000
△	1.956	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000		
□	4.959				

REFERENCE INFORMATION		
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LREF	1.5360	IN.
BREF	4.3000	IN.
XHRP	2.4000	IN.
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ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E*6

M496-MSFC

AR11981-3

MODEL

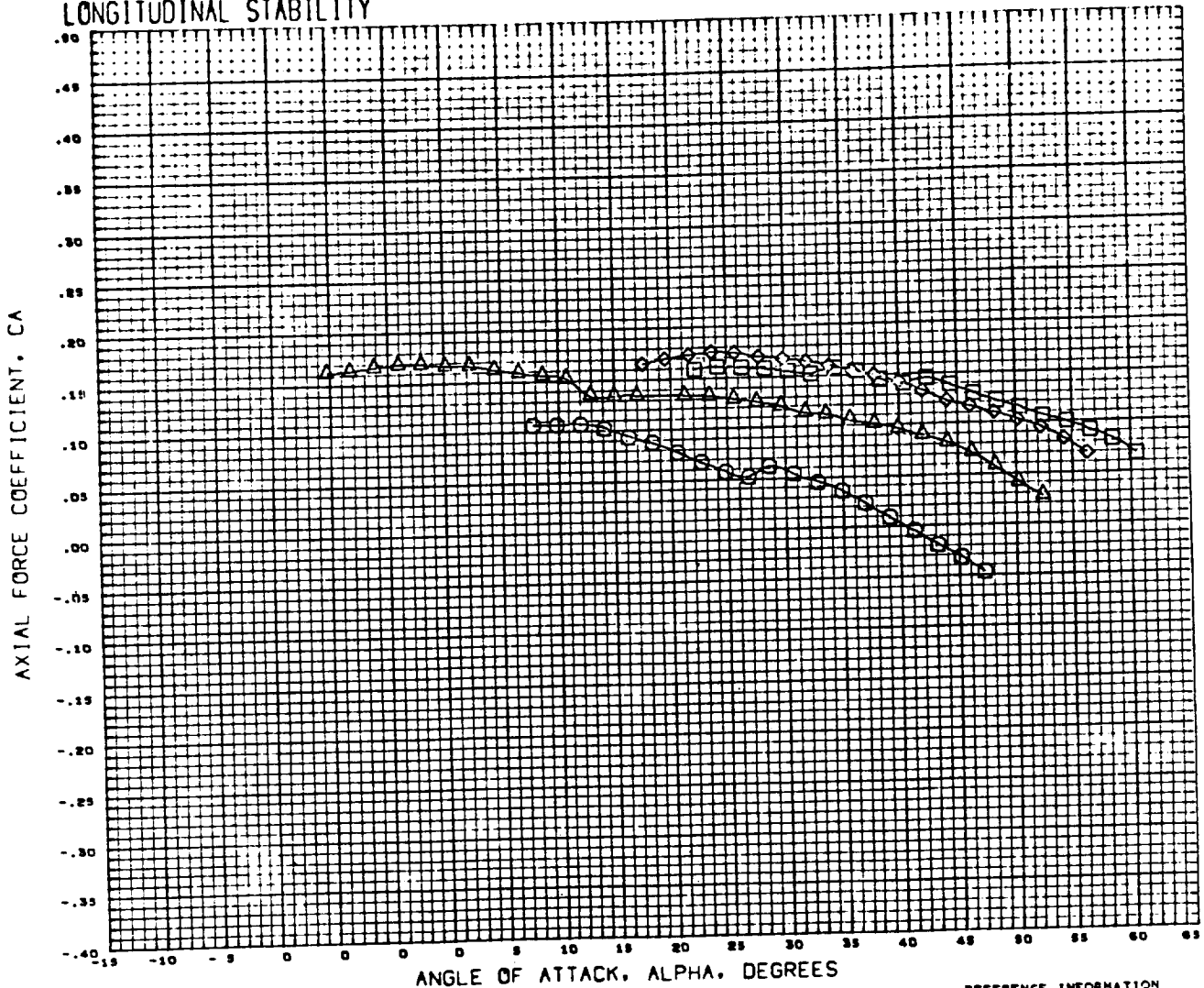
W6B2V2

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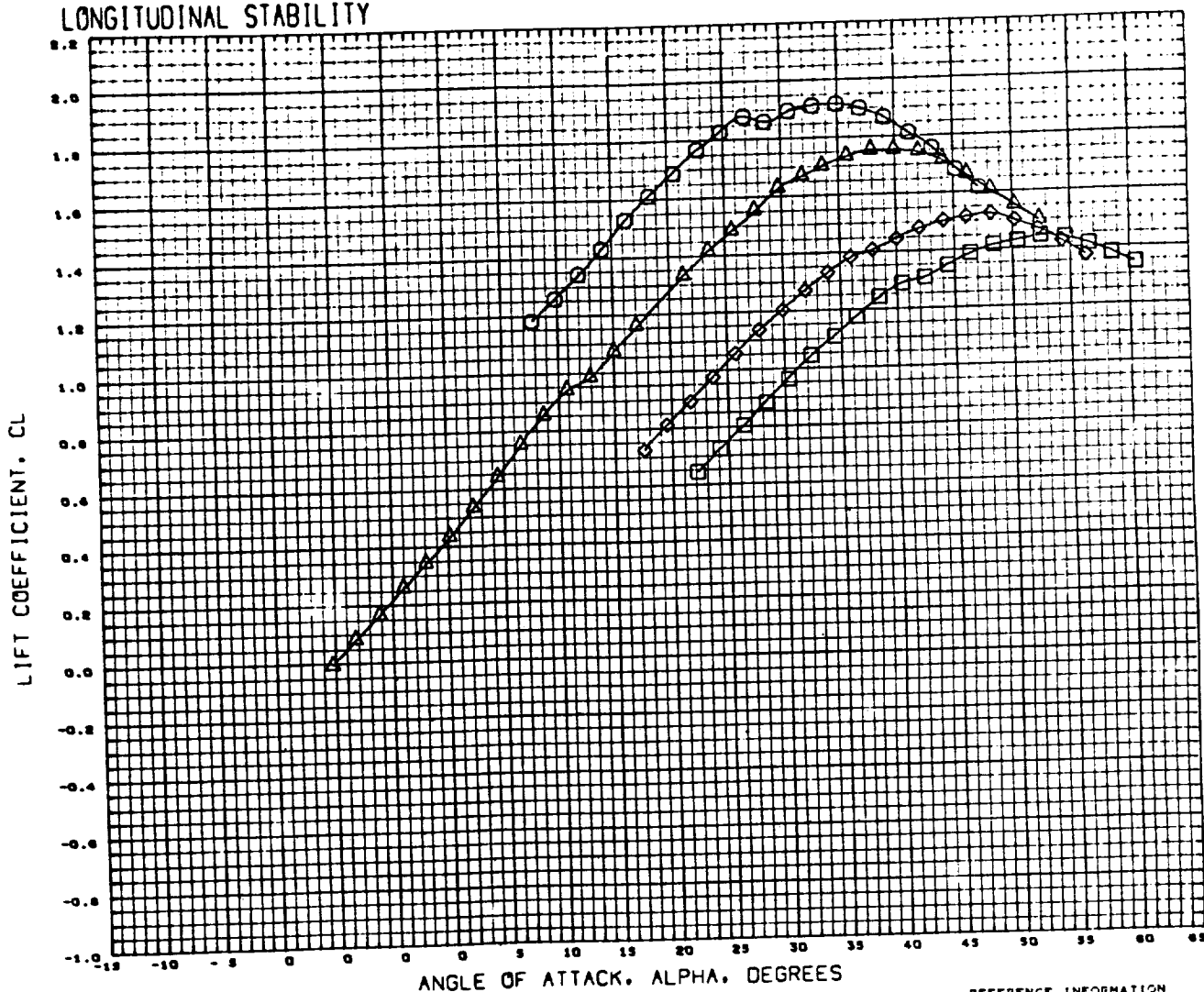
LONGITUDINAL STABILITY



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◇	3.480	ATLRON	0.000				BREF	4.3000	IN.
□	4.959						YHRP	2.4000	IN.
							YHRP	0.0000	IN.
							ZHRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E+6

LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	0.000
○	1.199	0.000	DEL	0.000	0.000
△	1.956	0.000	ELEVTR	0.000	0.000
◇	3.460	0.000			
□	4.959	0.000			

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
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BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E*G

M496-MSFC

AR11981-3

MODEL

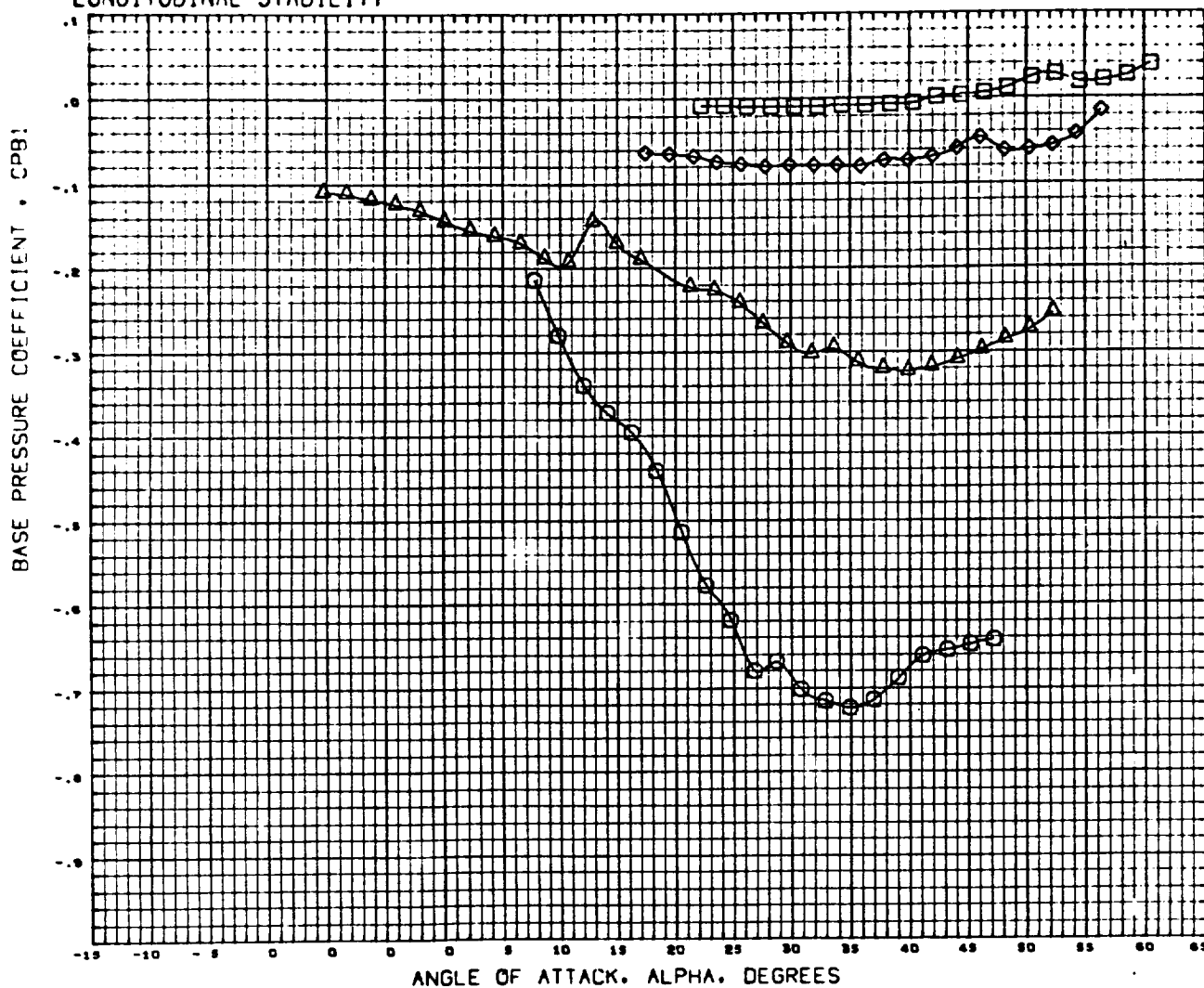
W6B2V2

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LONGITUDINAL STABILITY



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◇	3.400	ATLRON	0.000			BRFP	4.3000 IN.
□	4.939					XRFP	2.4000 IN.
						YRFP	0.0000 IN.
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M496-MSFC

AR11981-3

MODEL

W682V2

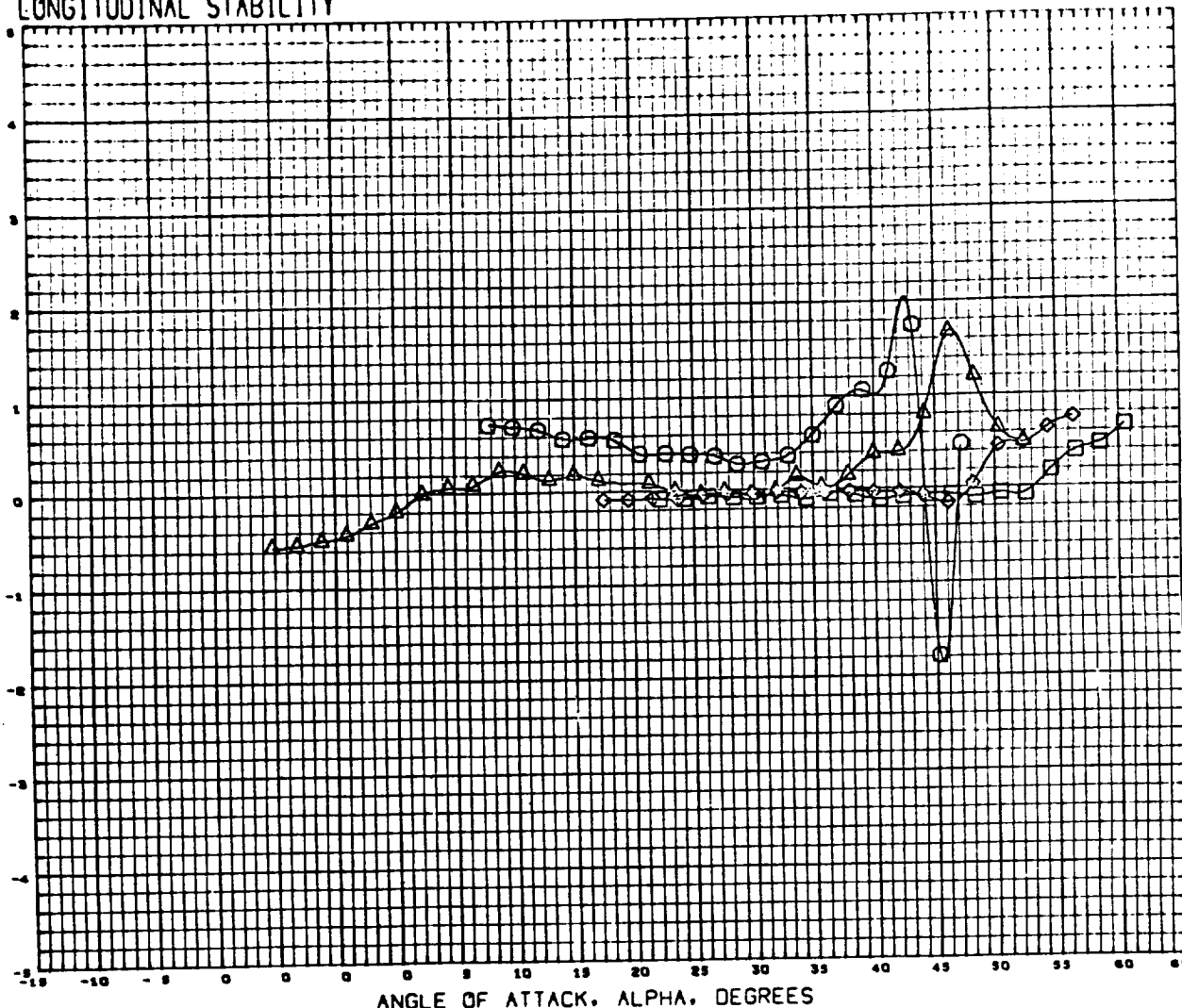
(F3809X) 06 SEP 72

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LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/CCN



SYMBOL
○
△
◇
□

MACH
1.199
1.936
3.460
4.939

BETA
DER
AILRON

PARAMETRIC VALUES
0.000
0.000
0.000

DEL
ELEVTR

0.000
0.000

REFERENCE INFORMATION

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LREF 1.5380 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0023

DATA HIST. CODE *E*6

M496-MSFC

AR11981-3

MODEL

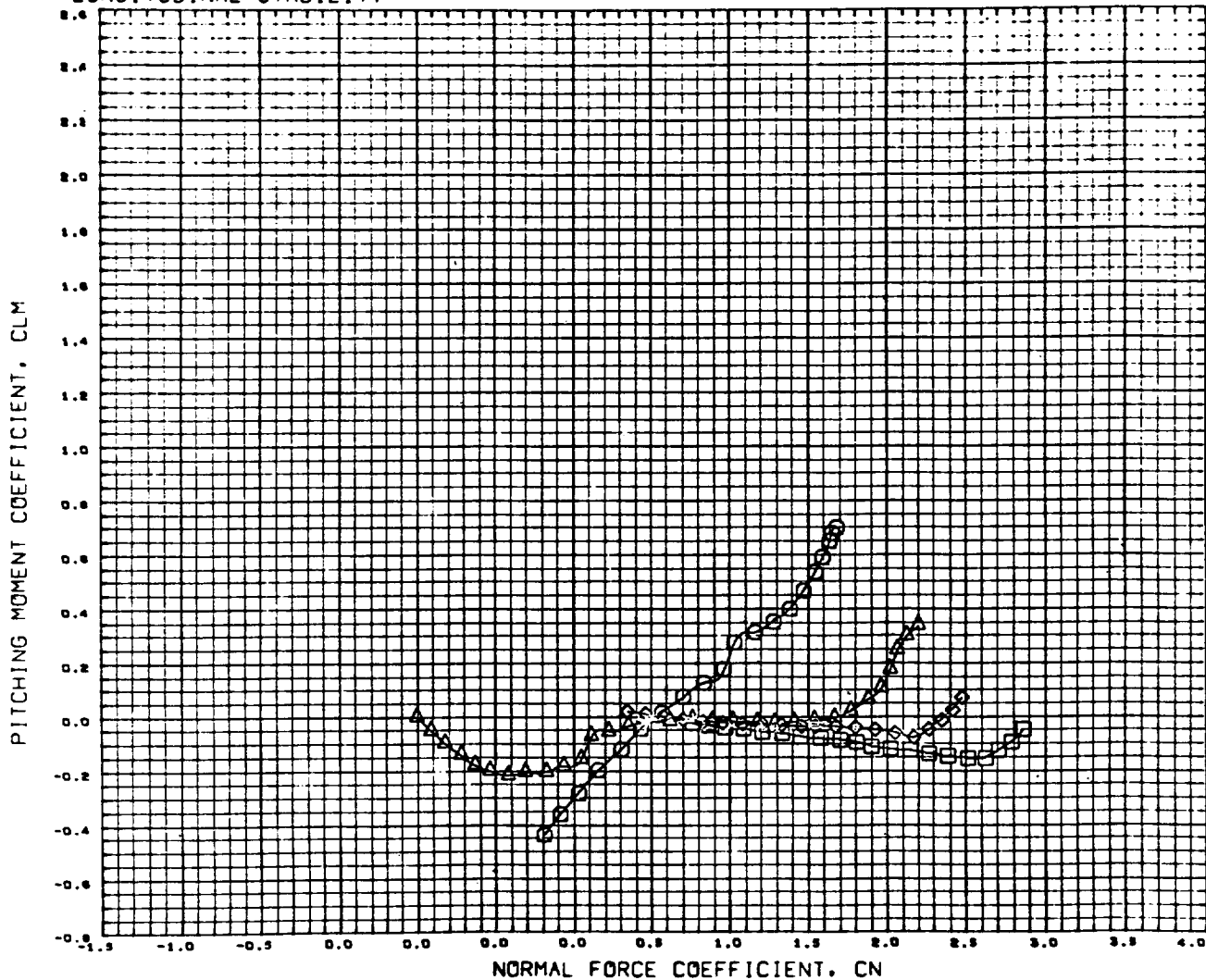
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(F3809X) 06 SEP 72

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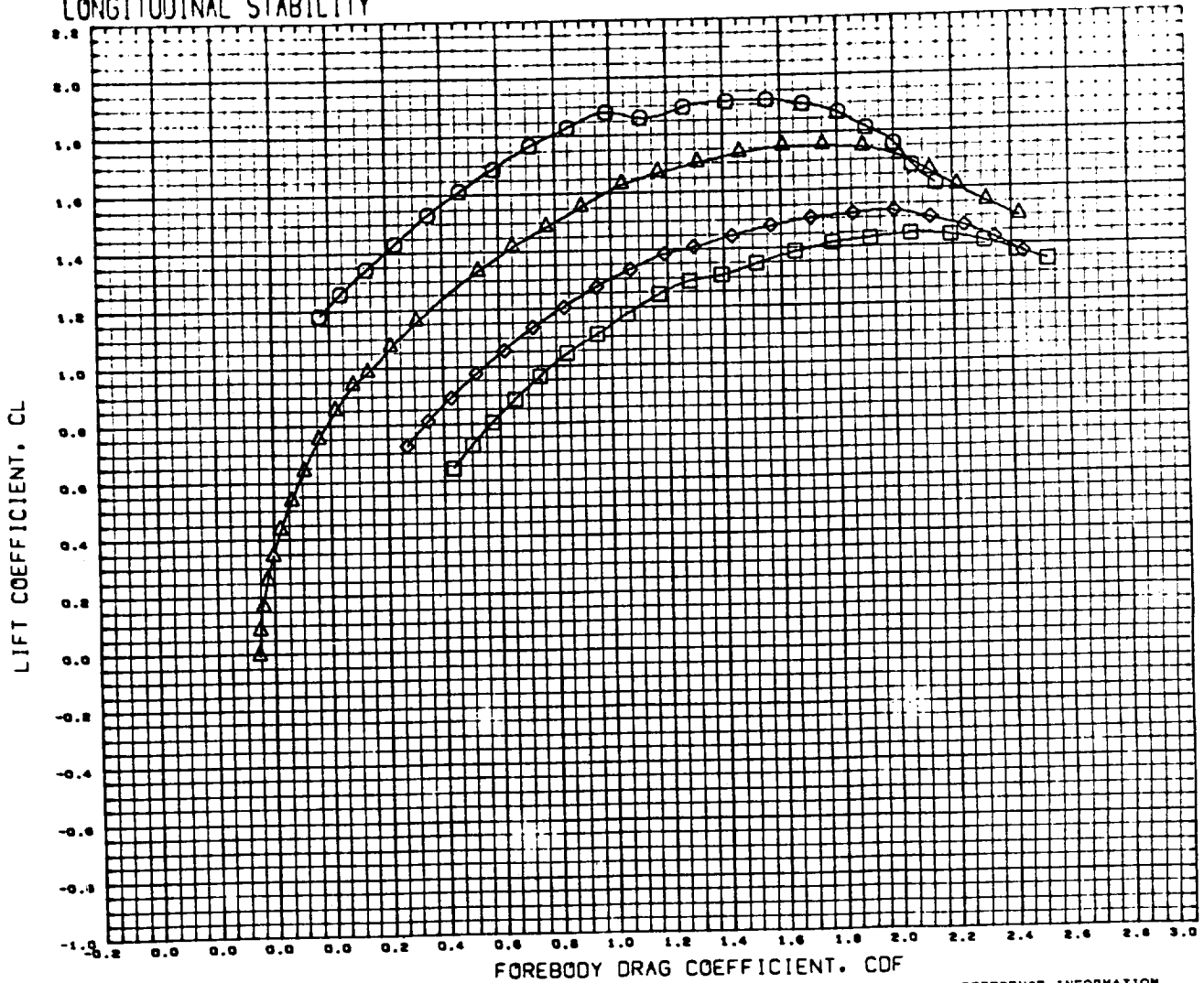
LONGITUDINAL STABILITY



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◇	×	1.956	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
□		3.480	AILRON	0.000			BREF	4.3000	IN.
		4.959					XMRP	2.4000	IN.
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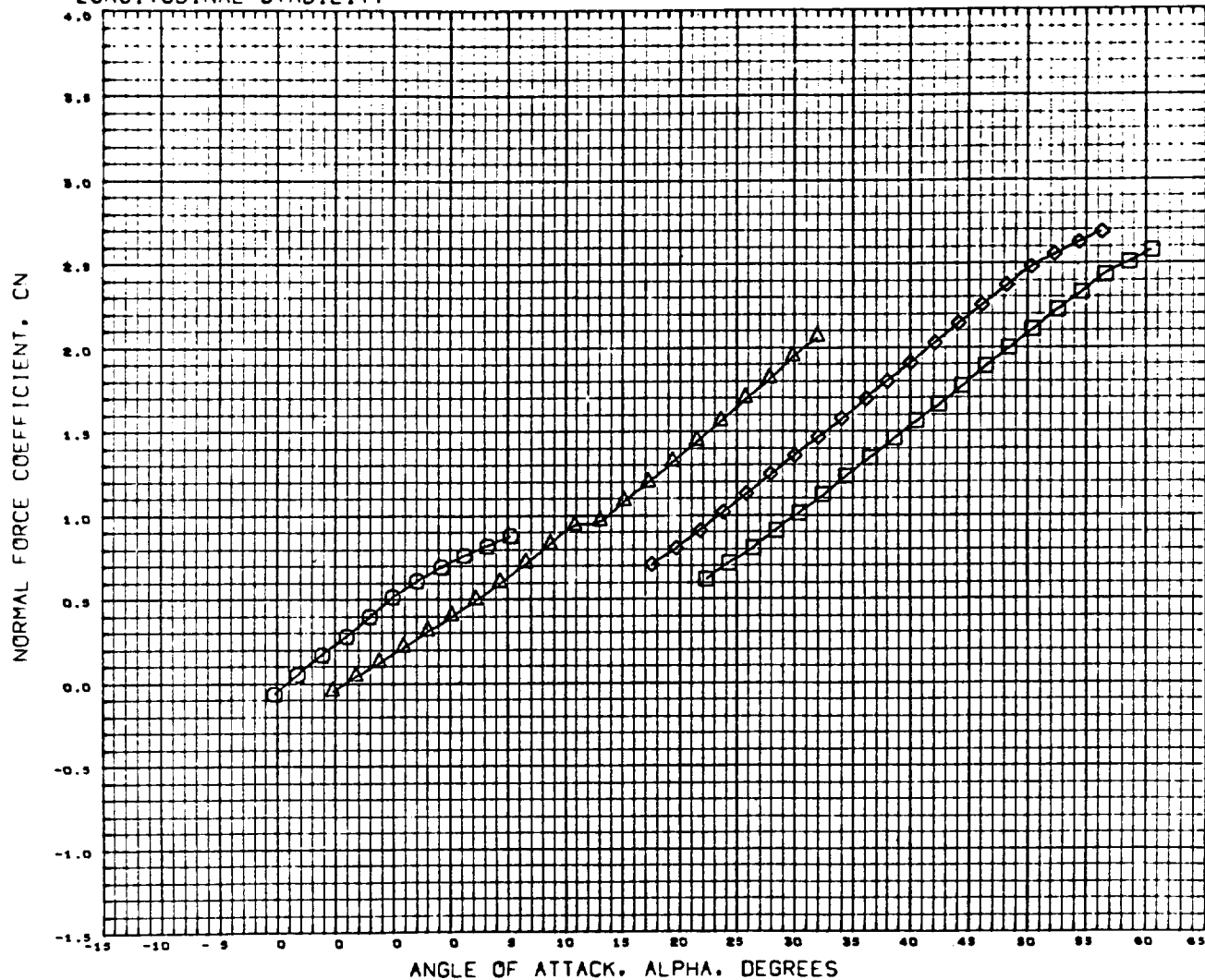
LONGITUDINAL STABILITY



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○	1.199	0.000	0.000	0.000		LREF	1.5360	1N.
△	1.950	0.090	0.000	0.000		BREF	4.3000	1N.
◇	3.400	0.000				XMRP	2.4000	1N.
□	4.939					YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
						SCALE	0.0025	

DATA HIST. CODE *E*G

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.601	BETA	0.000	DEL	0.000	SREF	4.9327	50. IN.
△	1.948	DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
□	3.480	ATLRON	0.000			QREF	3.7200	IN.
◇	4.959					XHRP	2.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
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DATA HIST. CODE *E*G

M496-MSFC

AR11981-3

MODEL

W482V2

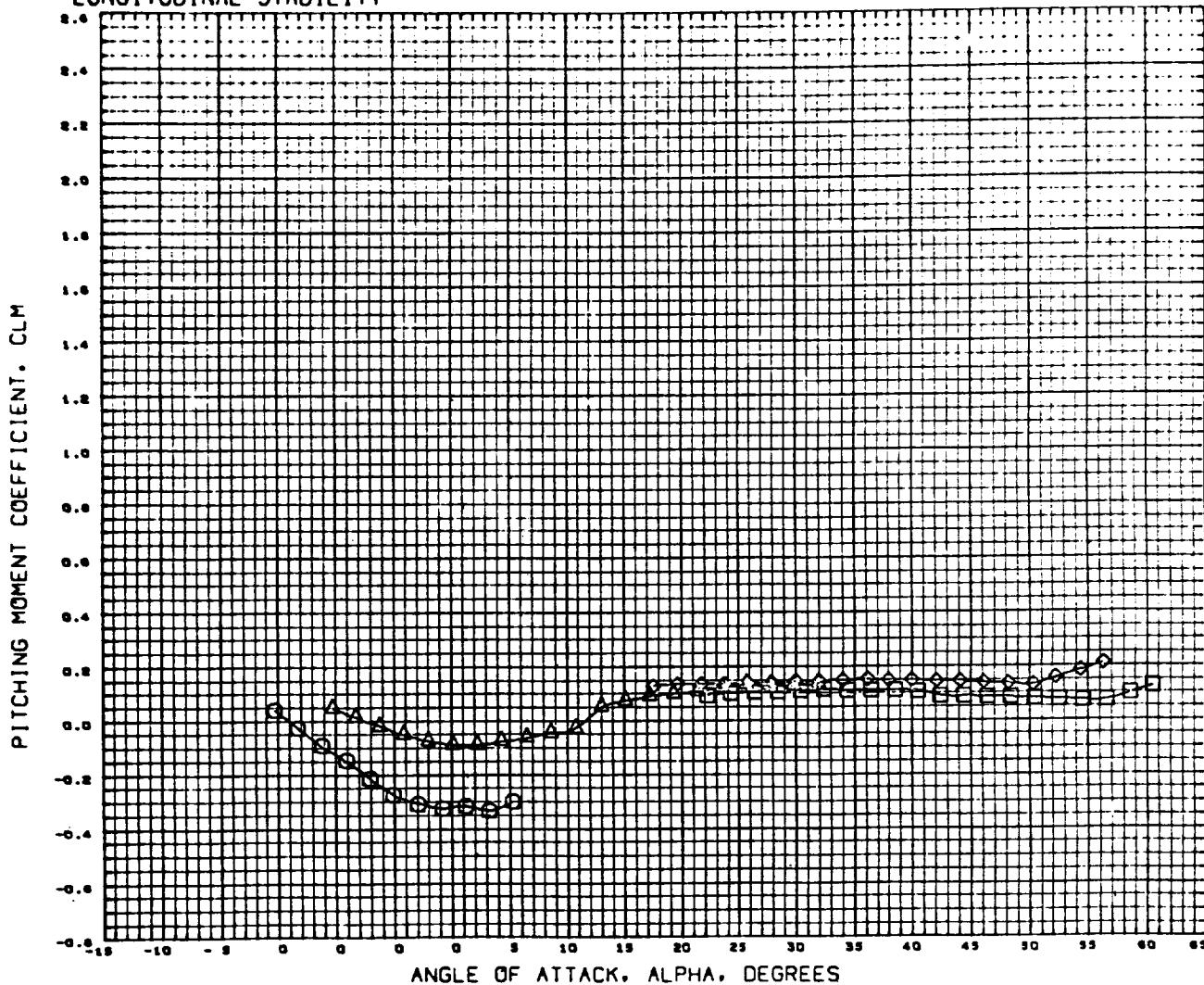
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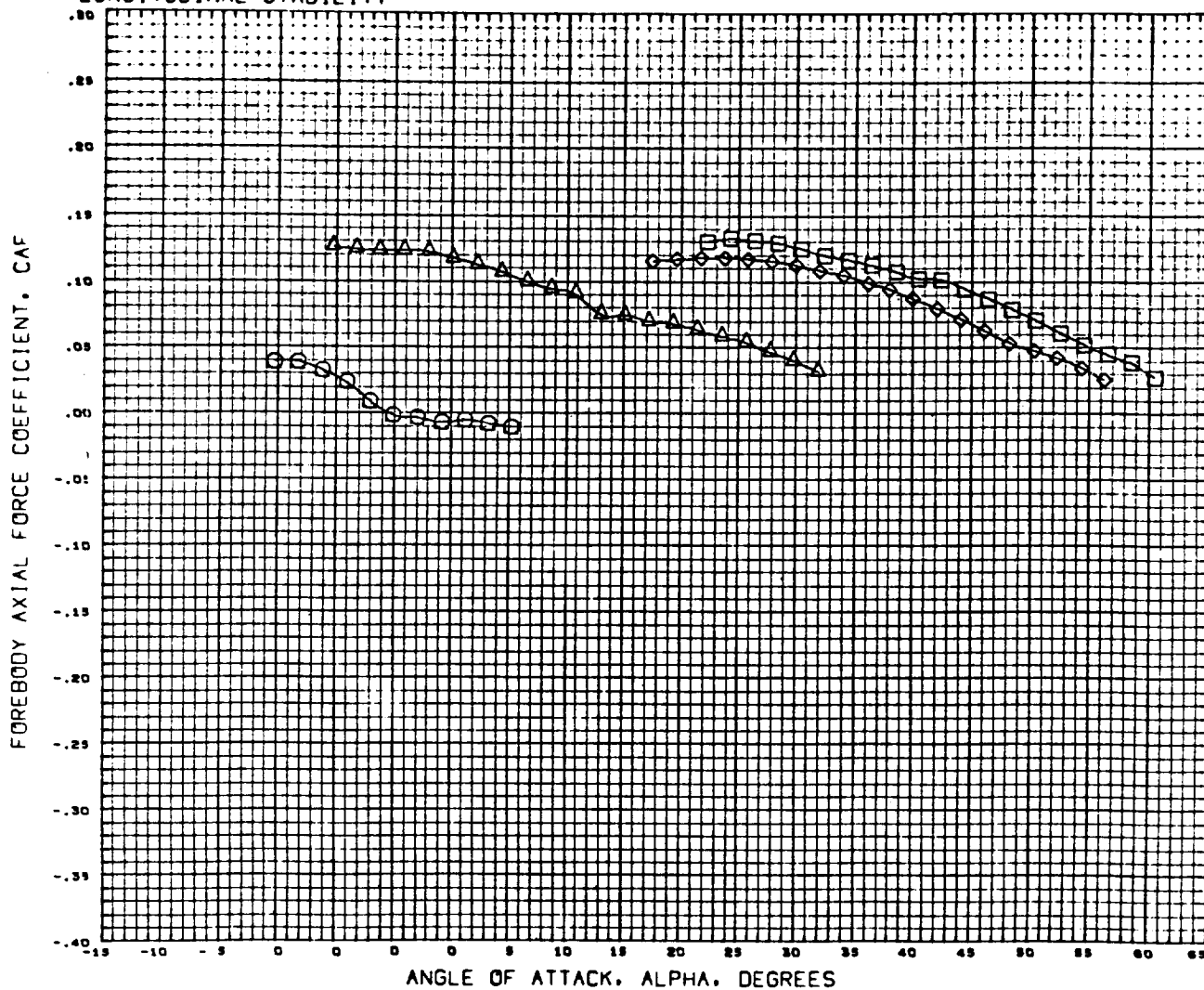
21

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	SCALE	SREF	LREF	BREF
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△	1.948	0.000	0.000	0.000	0.0025	2.4000	0.0000	0.0000
◇	3.480	0.000	0.000	0.000	0.0025	0.0000	0.0000	0.0000
□	4.959	0.000	0.000	0.000	0.0025	0.0000	0.0000	0.0000

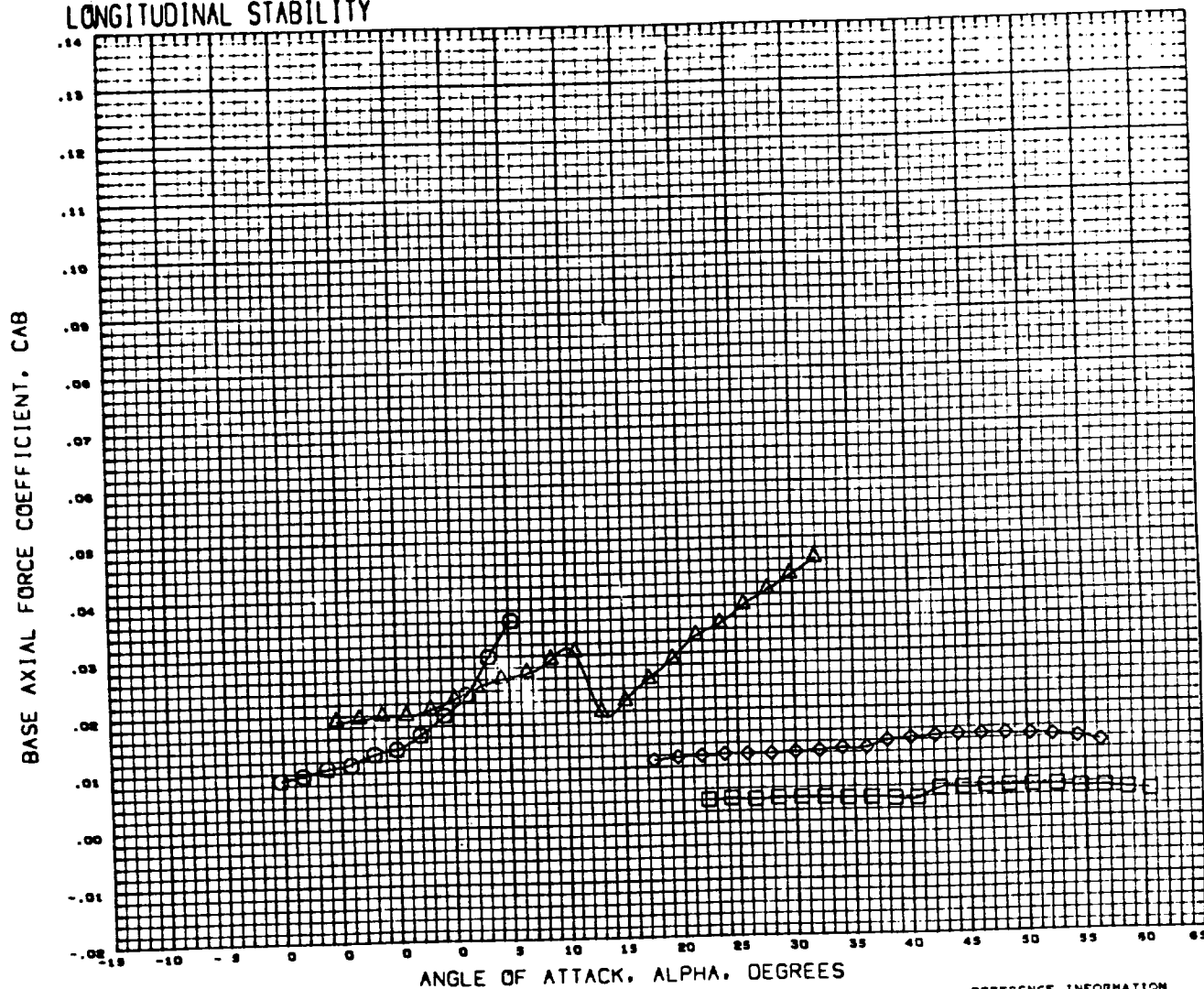
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
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△	3.480	ATLRW	0.000			SRF	3.7200
□	4.959					YMRP	2.4000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E*G

LONGITUDINAL STABILITY



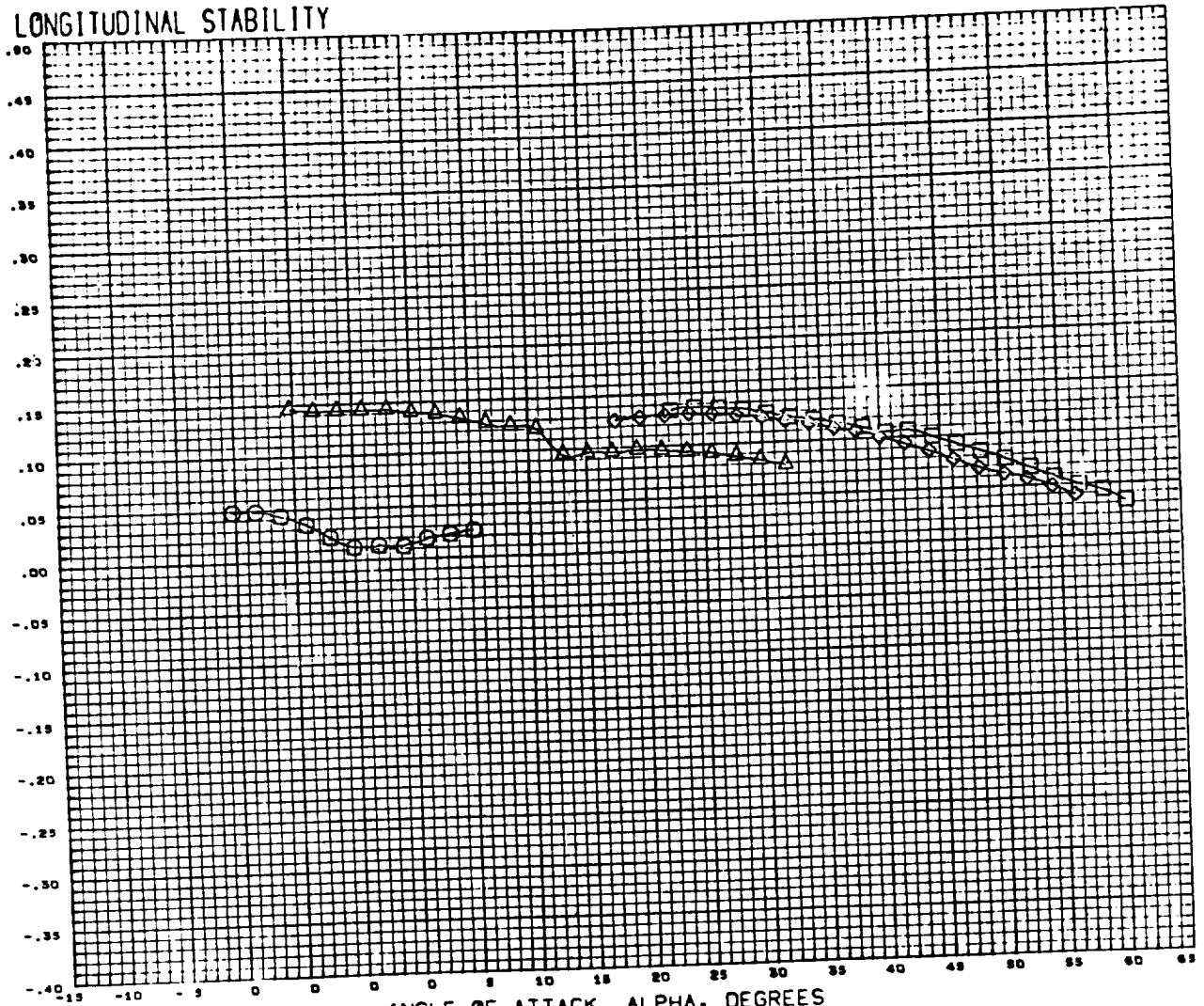
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△	1.948	0.000	0.000	0.000	BREF	3.7200	1M.
◇	3.480	0.000	0.000	0.000	XMRP	2.4000	1M.
□	4.939	0.000	0.000	0.000	YMRP	0.0000	1M.
					ZMRP	0.0000	1M.
					SCALE	0.0025	

DATA HIST. CODE *E*G

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LONGITUDINAL STABILITY

AXIAL FORCE COEFFICIENT, CA



ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL
○
△
□

MACH
0.601
1.948
3.480
4.959

BETA
DER
ATTORON

PARAMETRIC VALUES
0.000
0.000
0.000

DEL
ELEVTR
0.000
0.000

REFERENCE INFORMATION

BREF 4.9327 50.1N.
LREF 1.8580 IN.
BREF 3.7200 IN.
XMRP 2.4000 IN.
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496-MSFC

AR11981-3

MODEL

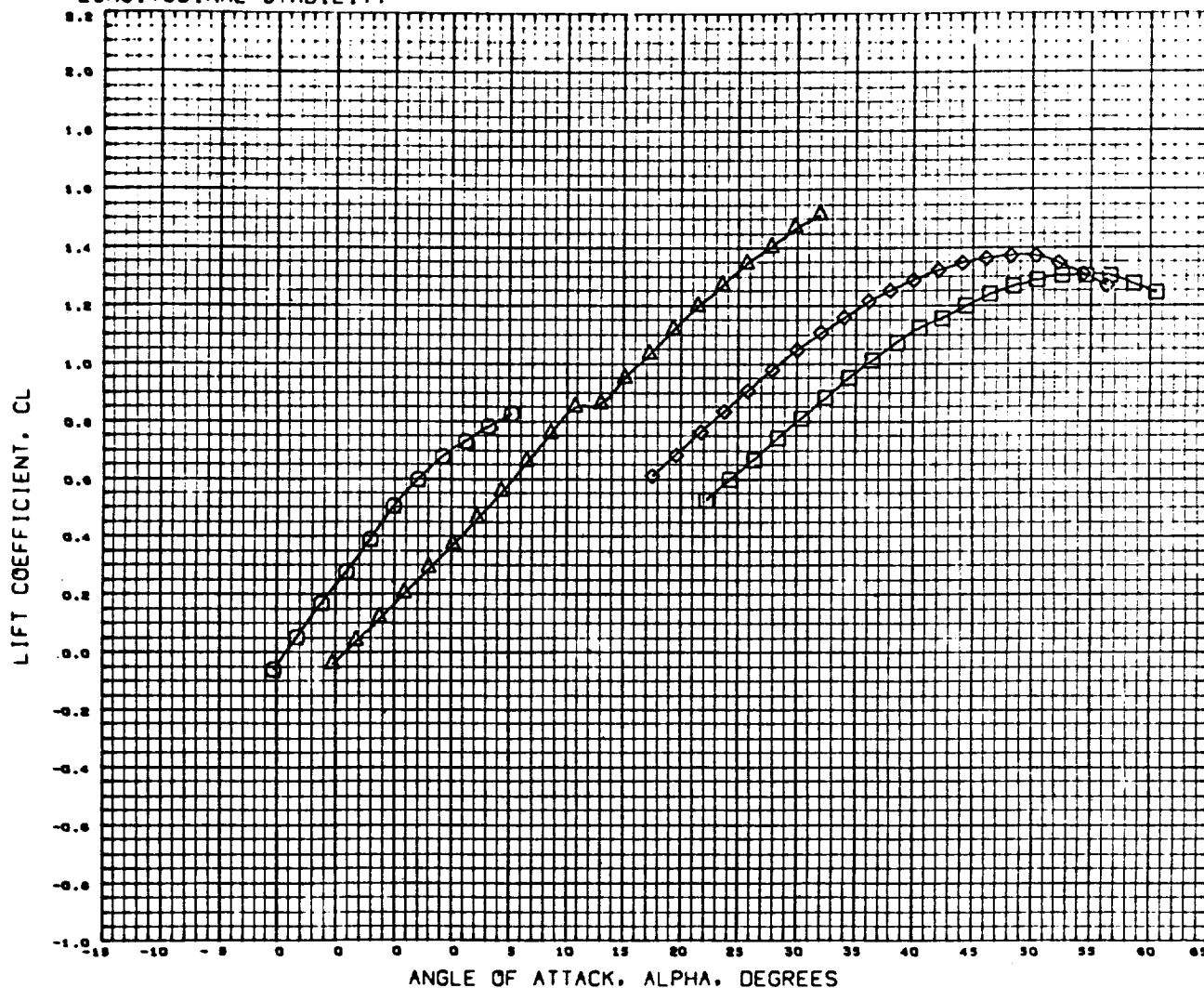
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(F3828X) 06 SEP 72

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LONGITUDINAL STABILITY

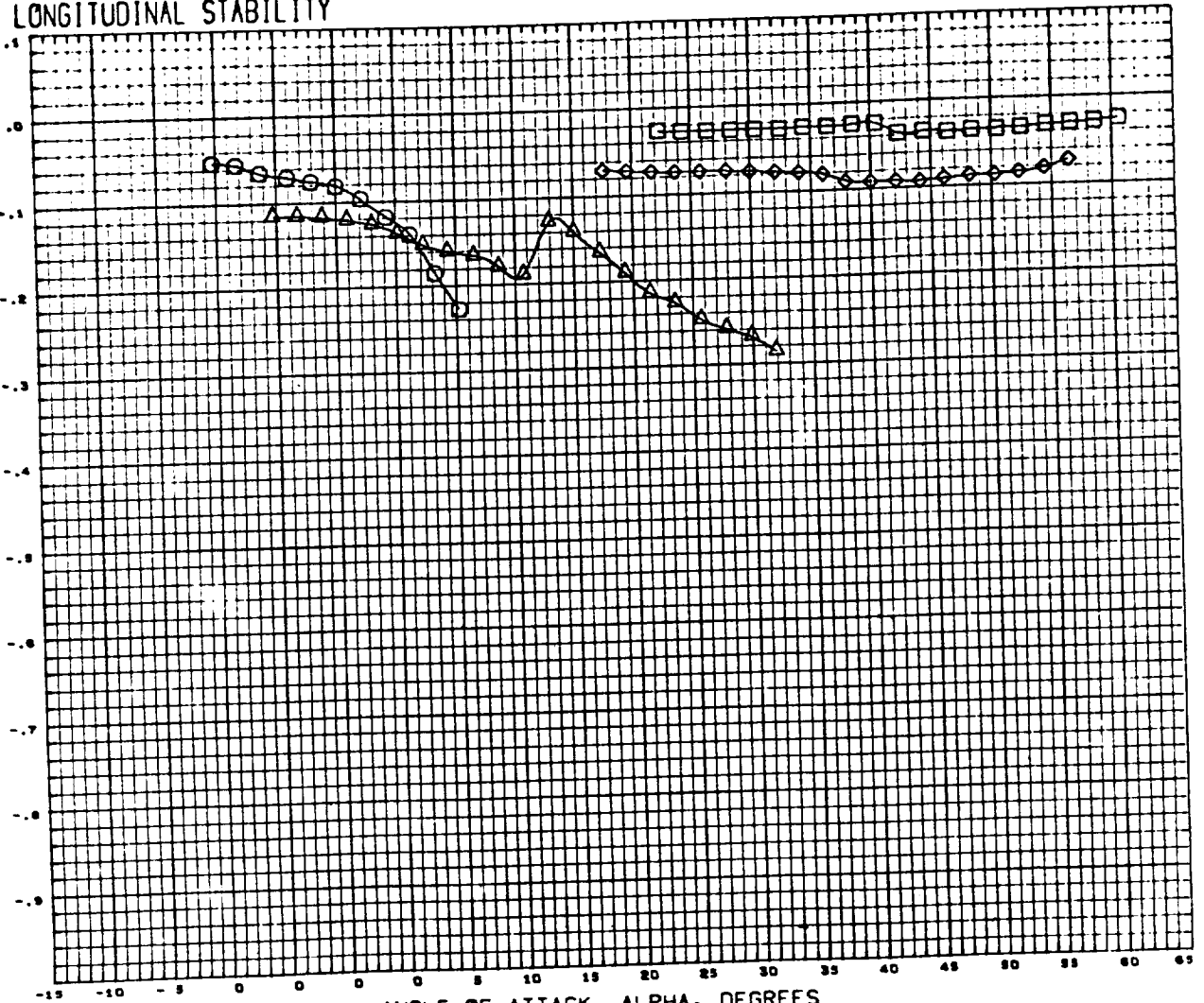


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR		SREF	IN.	
△	0.601	0.000	0.000	0.000		4.9327	32. IN.	
○	1.948	0.000	0.000	0.000		1.8990	IN.	
◊	3.480	0.000	0.000	0.000		3.7200	IN.	
□	4.959	0.000	0.000	0.000		2.4000	IN.	
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E*G

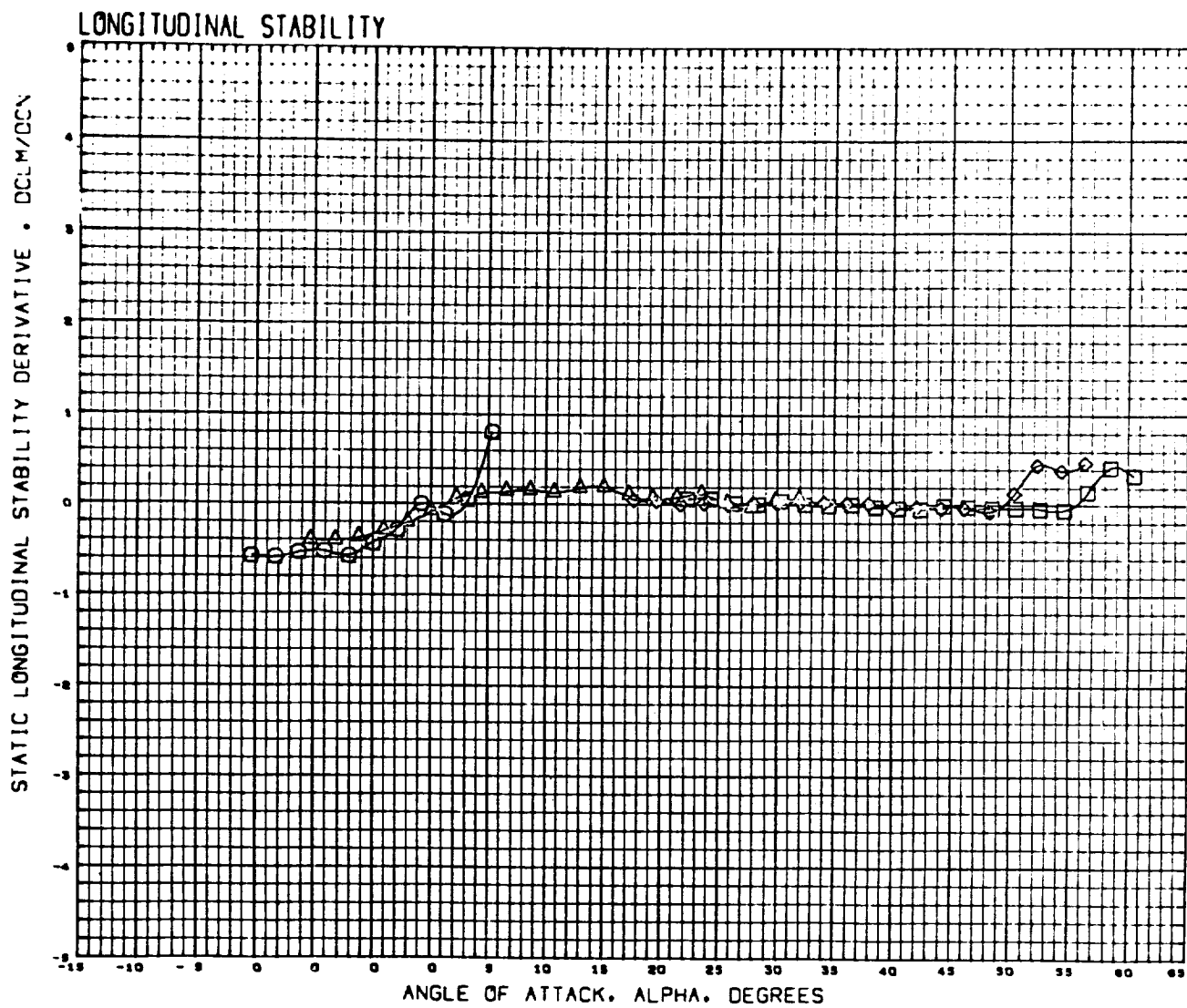
LONGITUDINAL STABILITY

BASE PRESSURE COEFFICIENT - CPB1



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.601	BETA	0.000	DEL	0.000		SREF	4.9327	50. IN.
△	1.948	DER	0.000	ELEVTR	0.000		LREF	1.6960	IN.
◇	3.480	AILRON	0.000				SREF	3.7200	IN.
□	4.959						XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *ECC

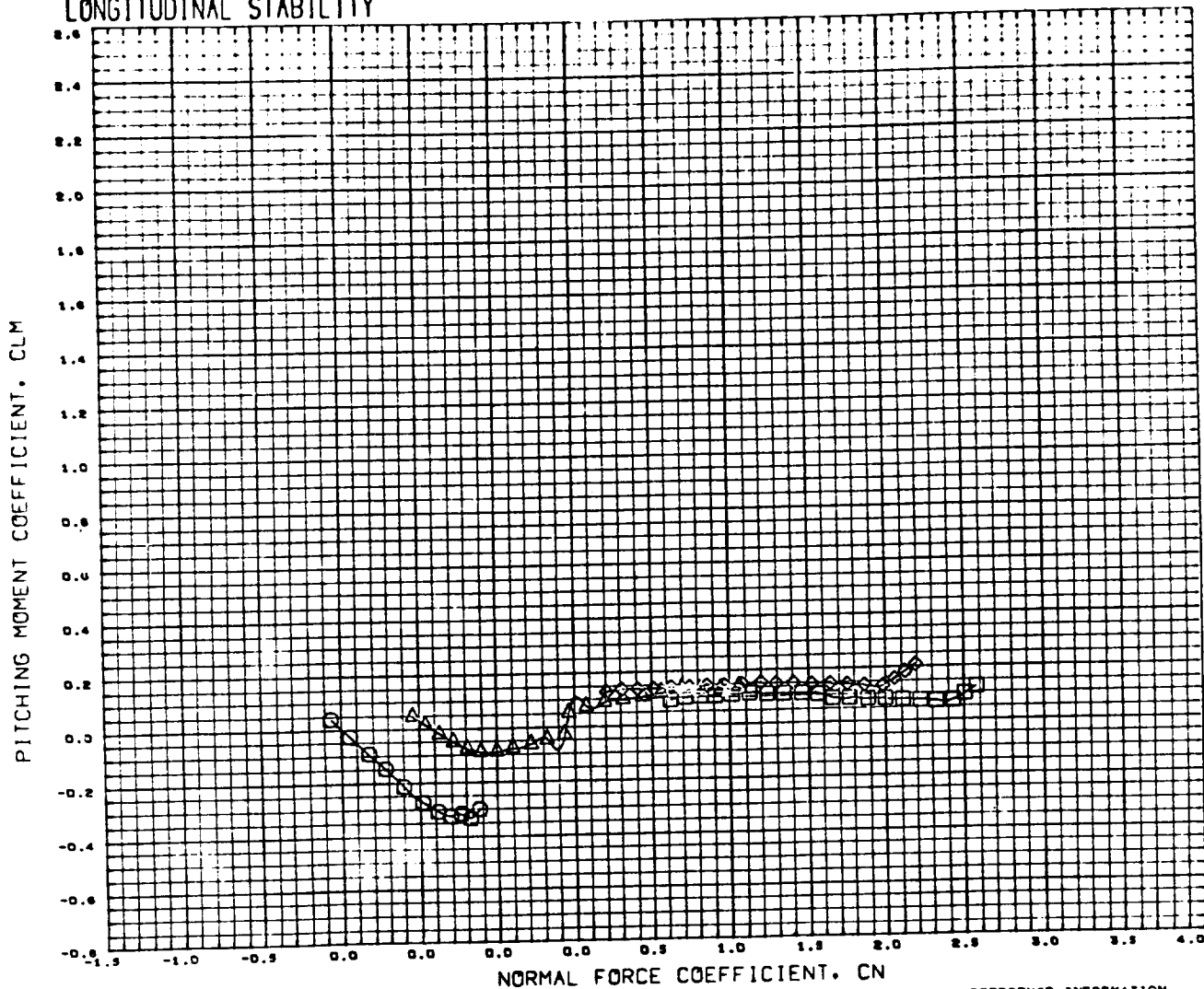


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○	0.801	BETA	0.000	DEL	0.000	SREF	4.9327	50. IN.
△	1.946	DER	0.000	ELEVTR	0.000	LREF	1.8960	IN.
◇	3.480	AILRON	0.000			BREF	3.7200	IN.
□	4.999					YMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E*G

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	0.000
○	0.801	0.000	DEL	0.000	
△	1.946	0.000	ELEVTR	0.000	
◇	3.400	0.000			
□	4.959	0.000			

REFERENCE INFORMATION		
SREF	4.9327	SQ. IN.
LREF	1.8980	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *EAG

M496-MSFC

AR11981-3

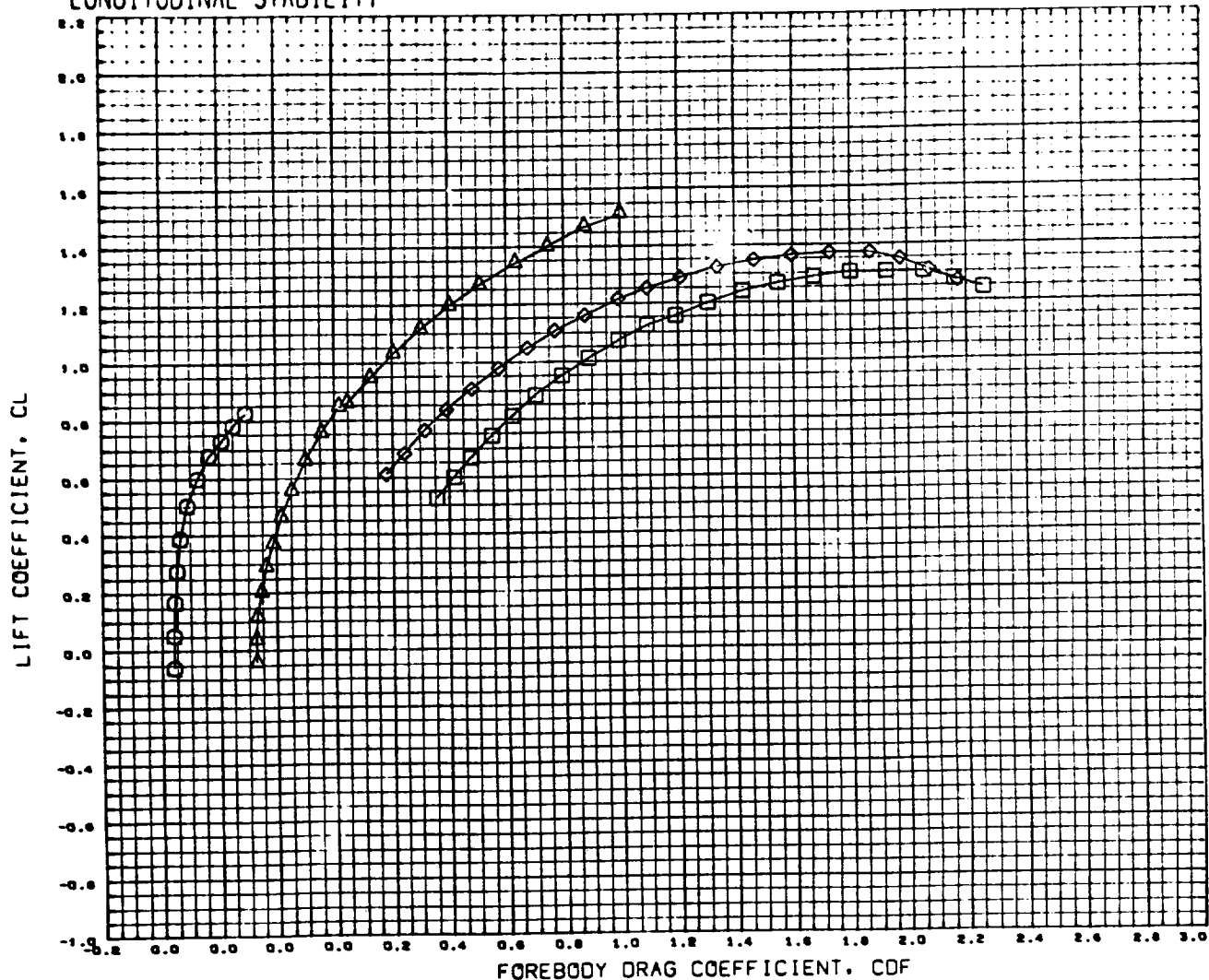
MODEL

W4B2V2

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LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.601	BETA	0.000	DEL	0.000	SREF	4.9327	sq.in.
△	1.948	DER	0.000	ELEVTR	0.000	LREF	1.8960	in.
◇	3.460	AILRON	0.000			BREF	3.7200	in.
□	4.959					XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0025	

DATA HIST. CODE *E*G

M496-MSFC

AR1198I-3

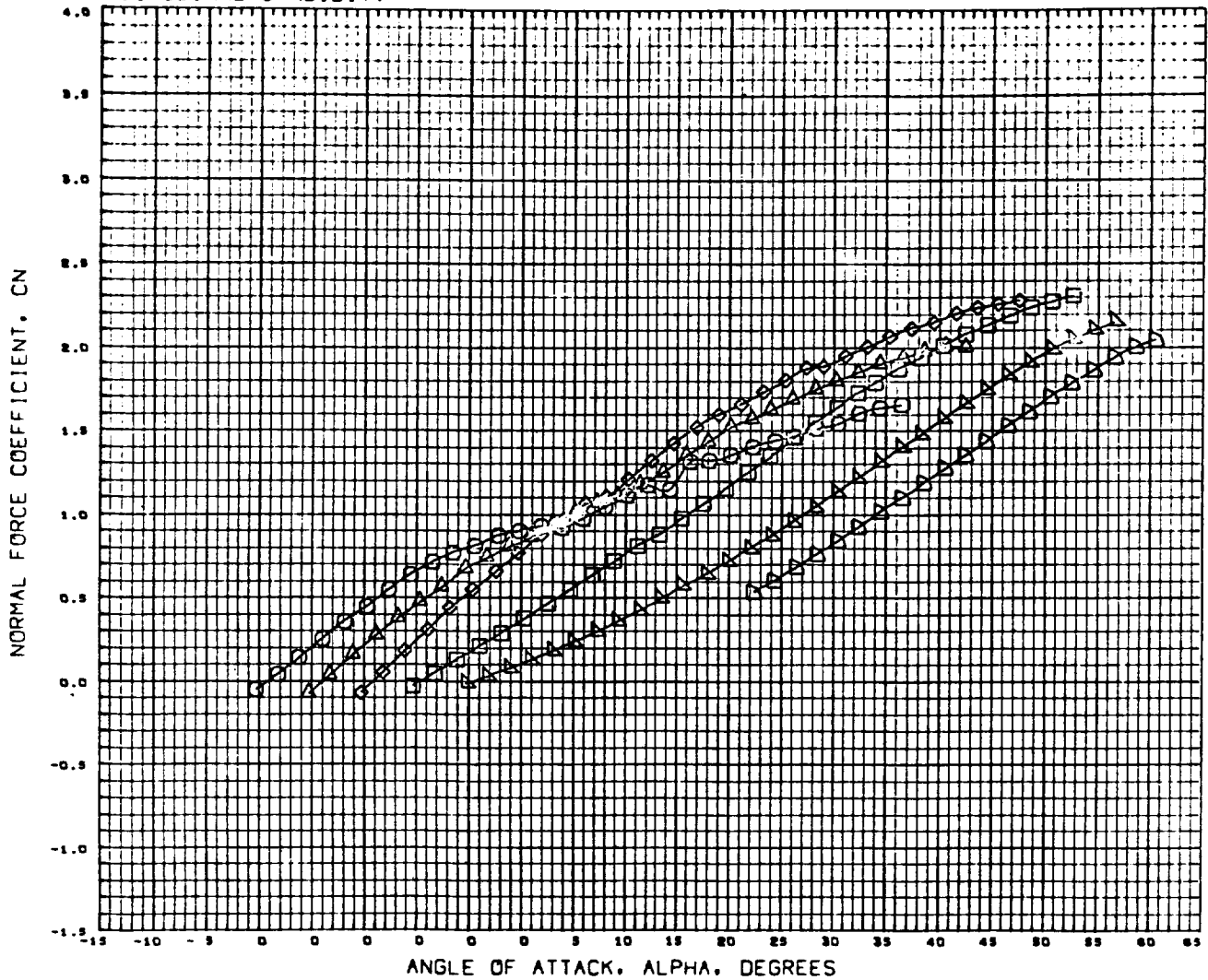
MODEL

W4B2V2

(F3828X) 06 SEP 72

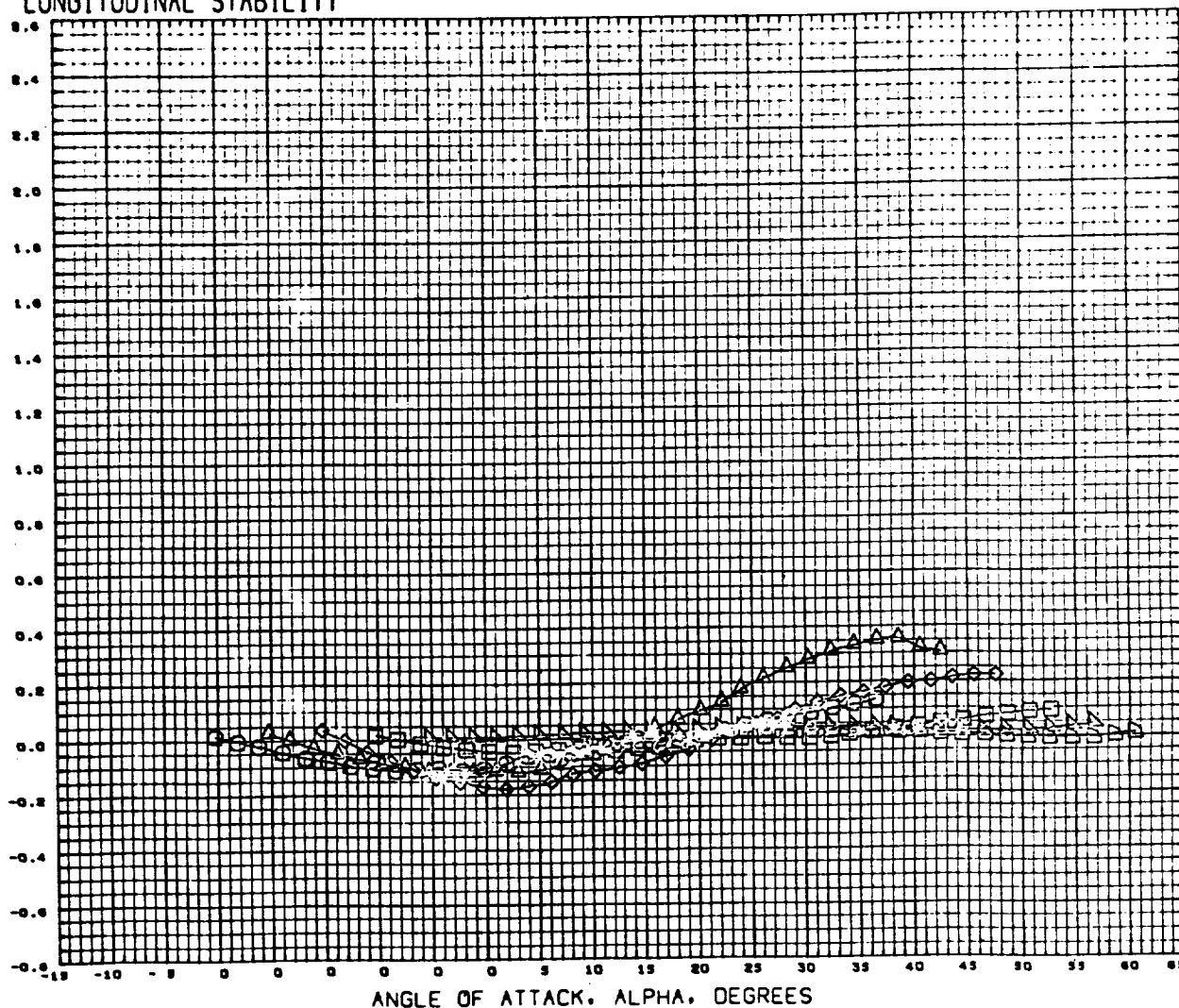
PAGE 30

LONGITUDINAL STABILITY



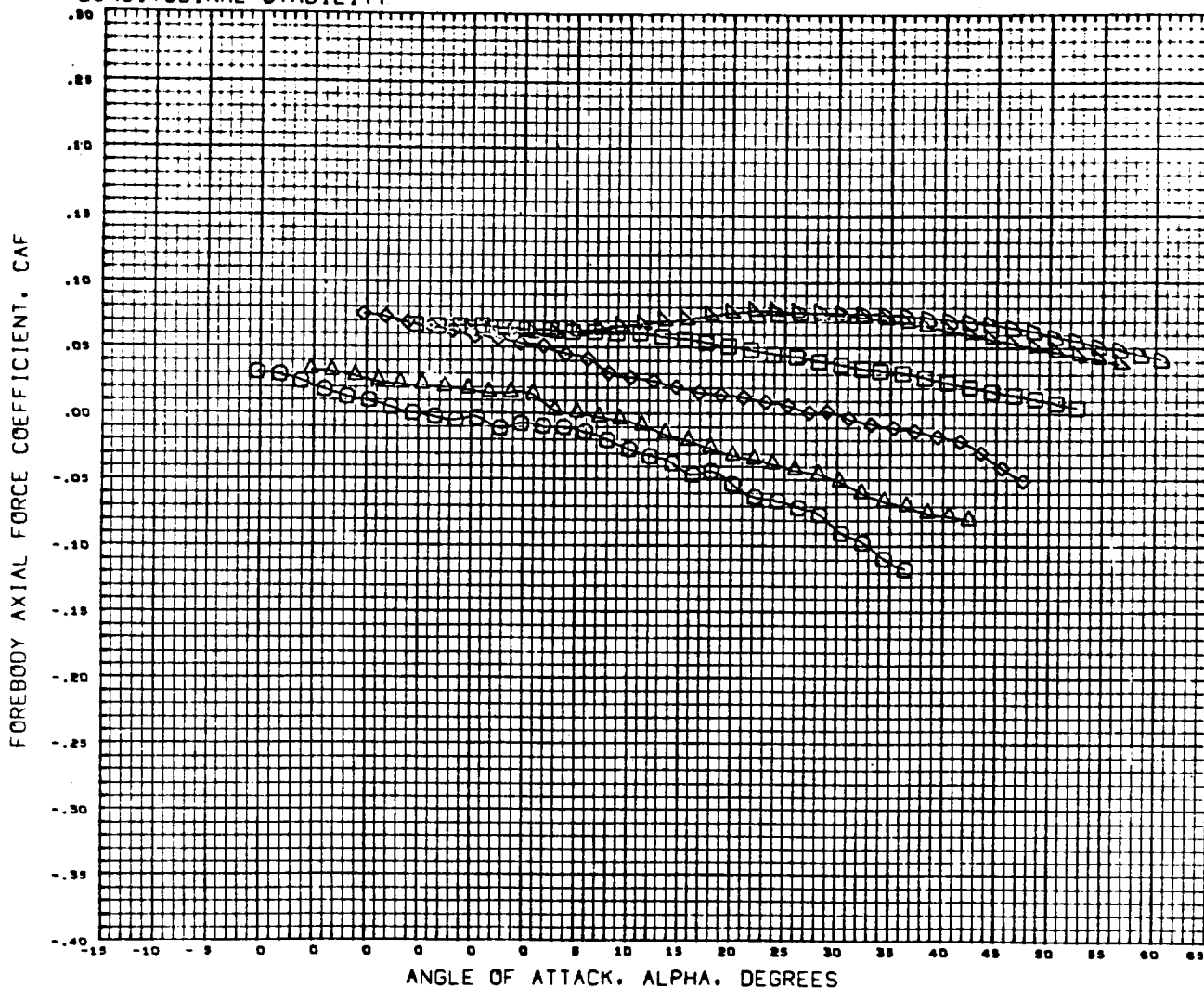
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□	0.900	DER	0.000	ELEVTR	0.000		LREF	3.1700	IN.
◇	1.201	ATLON	0.000				SREF	4.3920	IN.
△	1.961						XNRP	2.4000	IN.
▽	3.490						YNRP	0.0000	IN.
◇	4.939						ZNRP	0.0000	IN.
		DATA HIST. CODE	*E*G				SCALE	0.0025	

PITCHING MOMENT COEFFICIENT, CLM



PARAMETRIC VALUES				REFERENCE INFORMATION		
SYMBOL	MACH	BETA	DEL	SREF	7.7005	SQ. IN.
0.599	0.000	0.000	0.000	3.1700	IN.	
0.900	0.000	ELEVTR	0.000	BREF	4.3920	IN.
1.201	ATLRON	0.000		ZMRP	2.4700	IN.
1.961				YMRP	0.0000	IN.
3.480				ZMRP	0.0000	IN.
4.959	DATA HIST. CODE	0E+6		SCALE	0.0025	
M496-MSFC	AR11981-3	MODEL	W9B2V1	(F3823X)	06 SEP 72	PAGE 32

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.999	BETA	0.000	DEL	0.000	SREF	7.7005 IN.
◇	0.950	DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
◇	1.201	ATLRON	0.000			BREF	4.3820 IN.
◇	1.961					YMRP	2.4000 IN.
◇	3.480					ZMRP	0.0000 IN.
◇	4.959	DATA HIST. CODE	*EAC			SCALE	0.0025

M496-MSFC

AR11981-3

MODEL

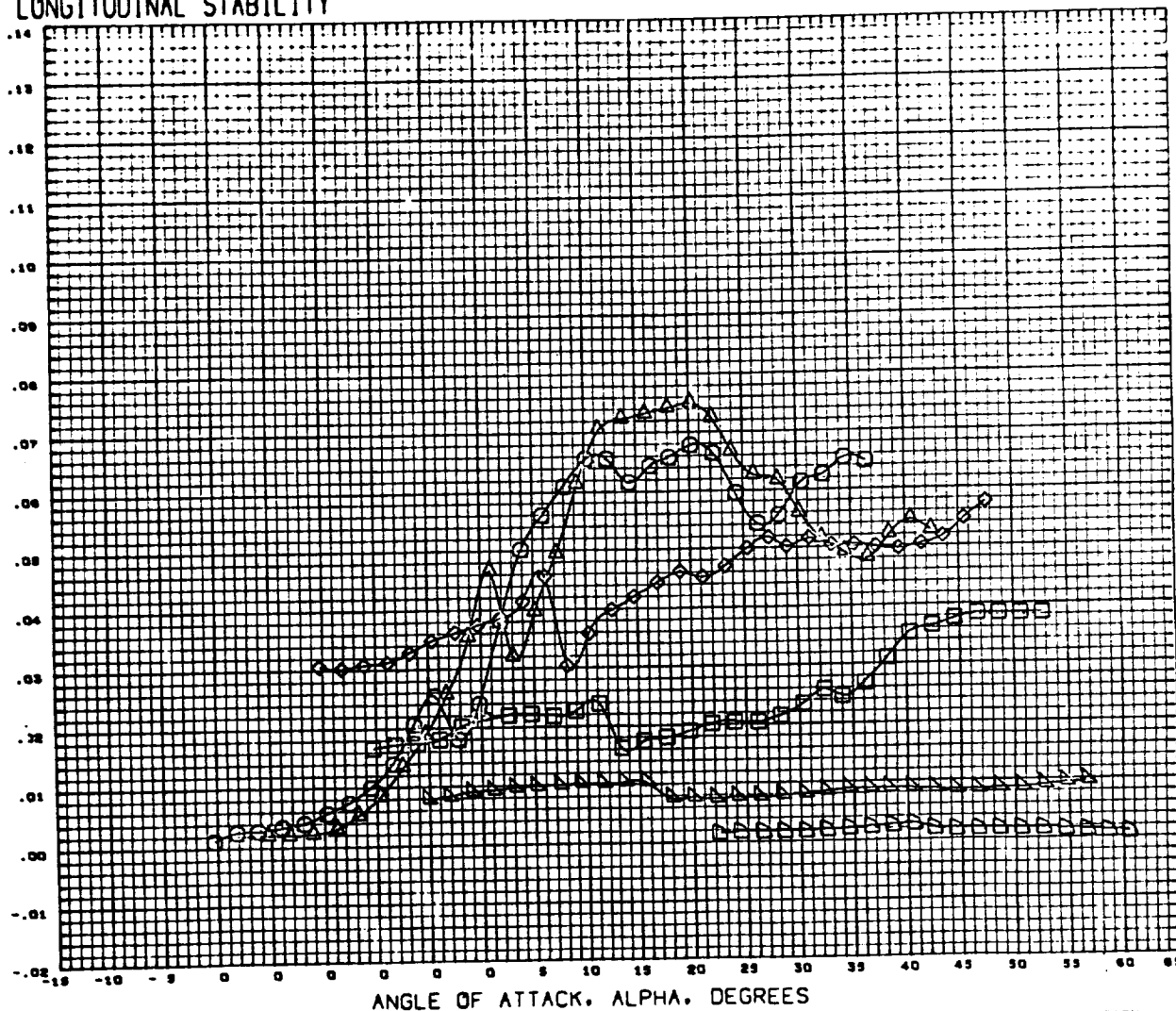
W9B2V1

(F3823X) 06 SEP 72

PAGE

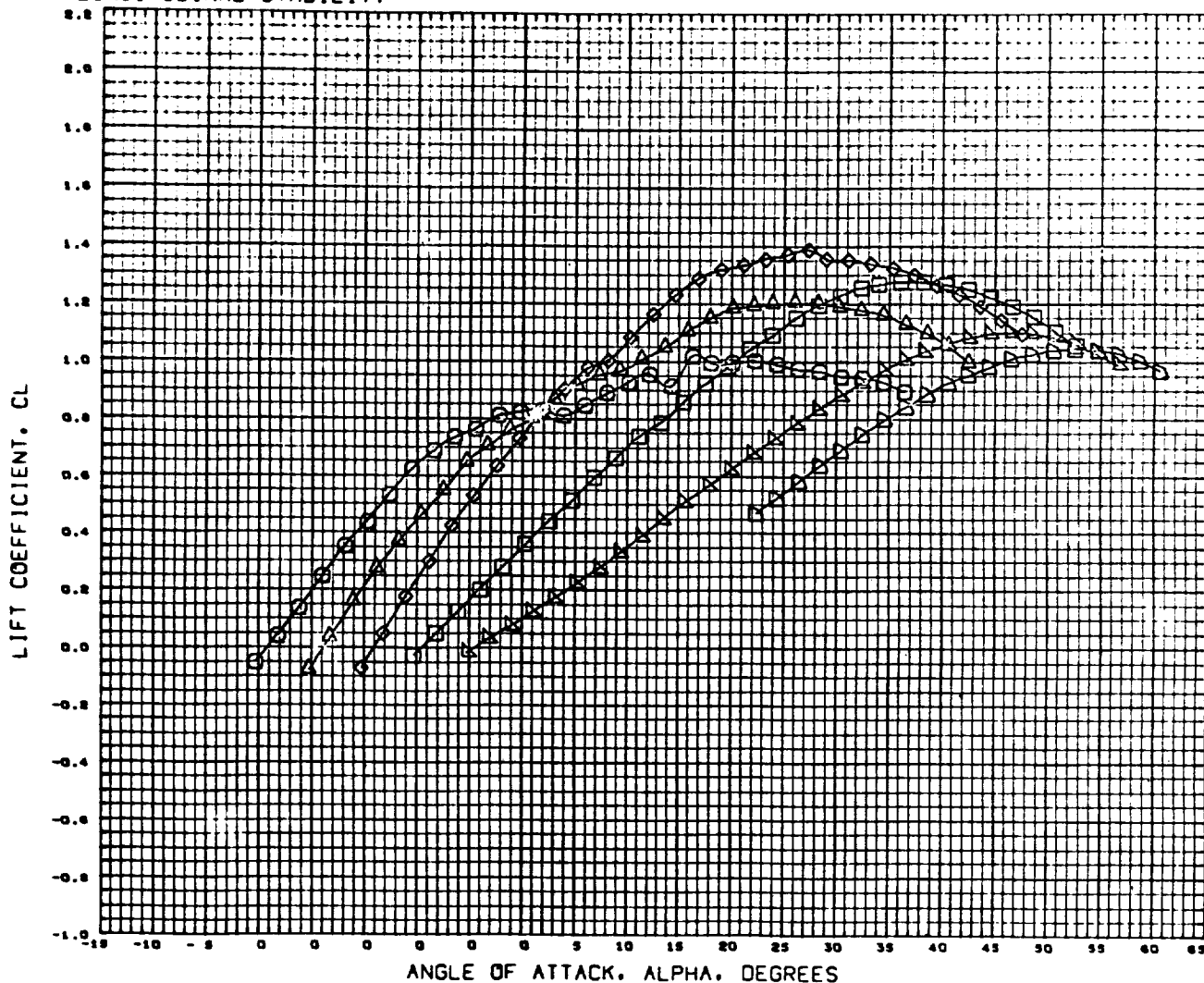
33

BASE AXIAL FORCE COEFFICIENT. CAB



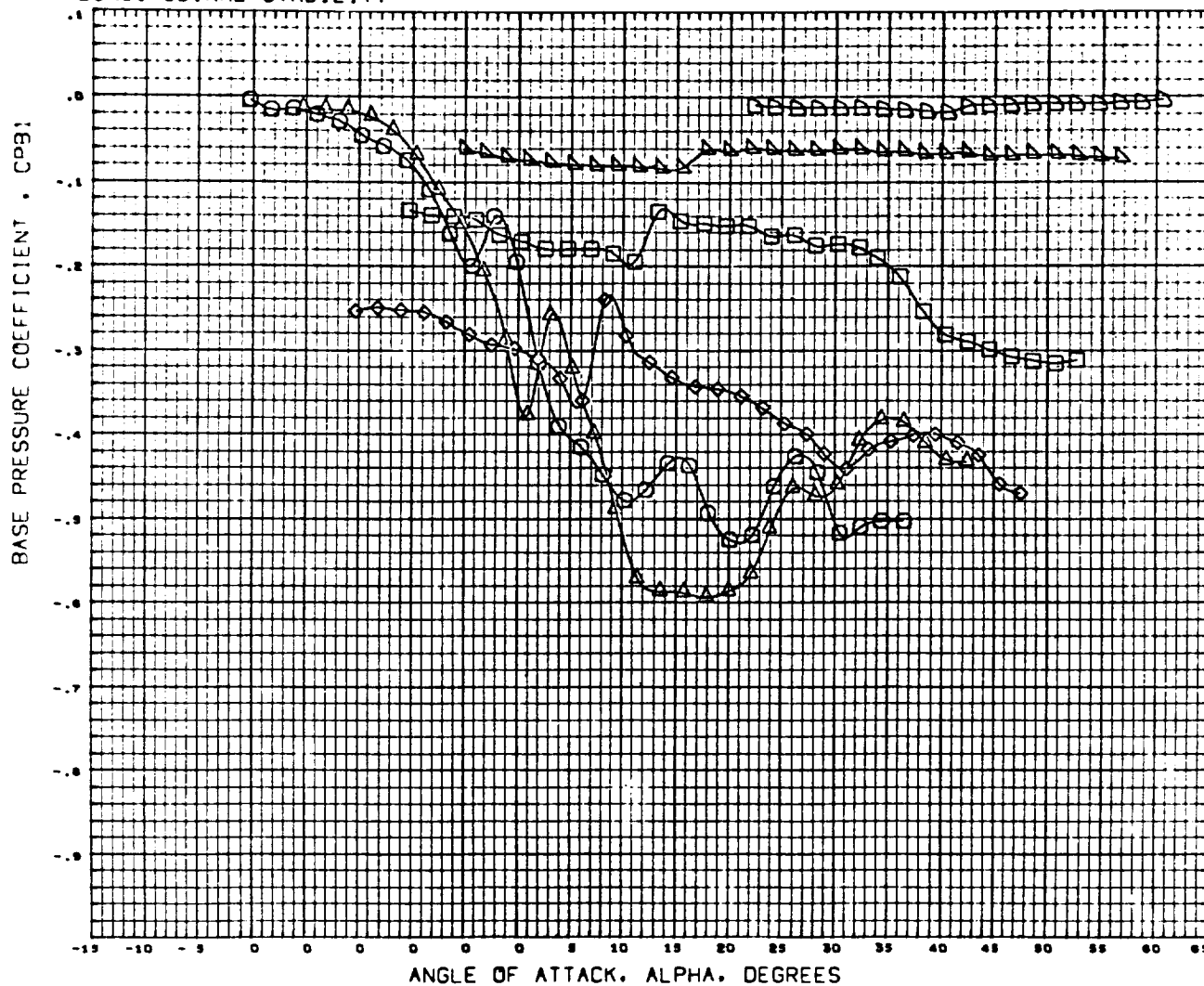
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	0.900	0.000	ELEVTR	BRF	4.3920	IN.
	1.201	0.000		XMRP	2.4000	IN.
	1.961			YMRP	0.0000	IN.
	3.400			ZMRP	0.0000	IN.
	4.999			SCALE	0.0025	
	DATA HIST. CODE		*E+G			
M496-MSFC AR11981-3 MODEL W982V1 (F3823X) 06 SEP 72 PAGE 34						

LONGITUDINAL STABILITY

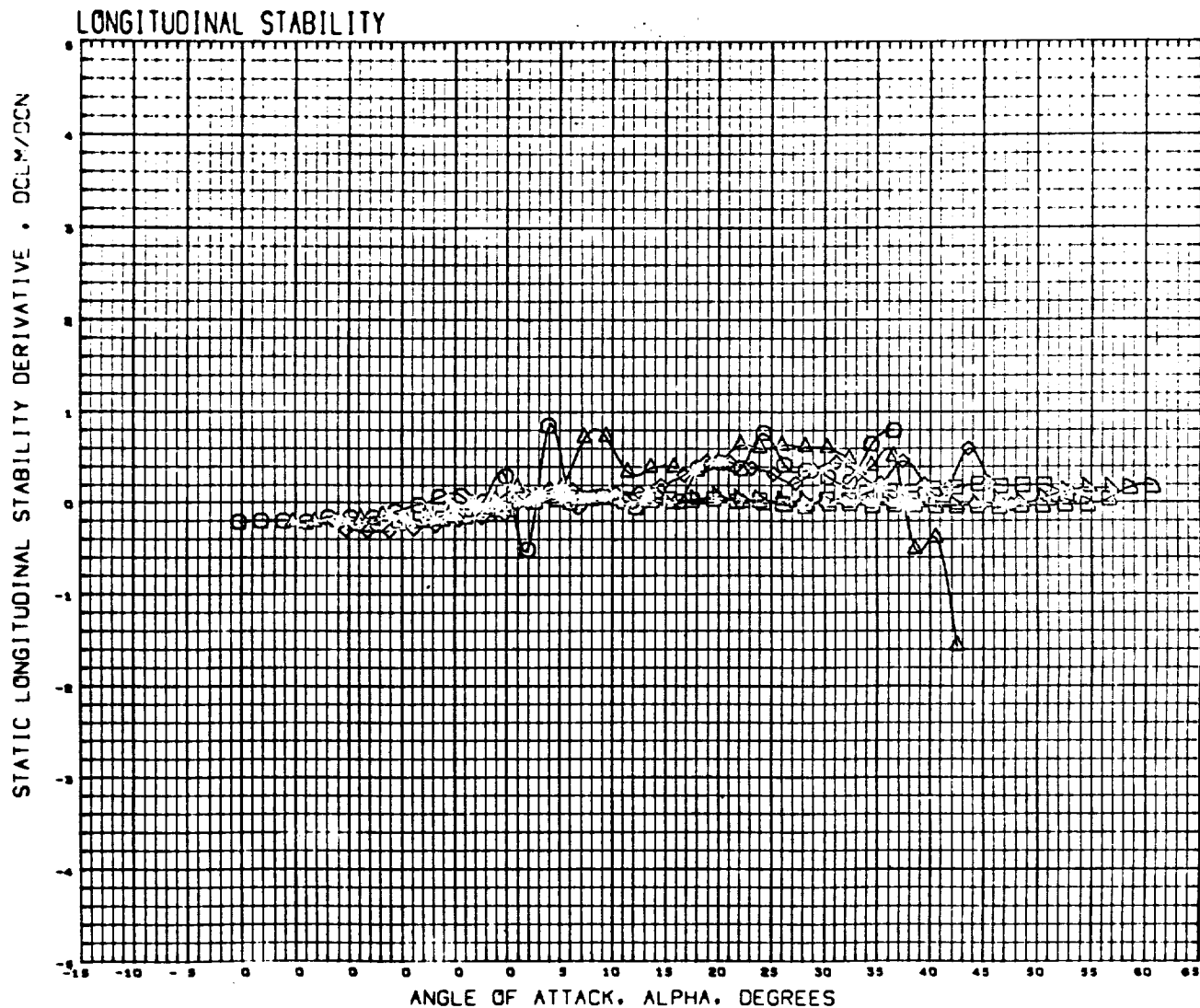


SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
○	0.999	BETA	0.000	DEL	7.7005	30. IN.	
◇	0.900	DER	0.000	ELEVTR	3.1700	IN.	
□	1.201	AILRON	0.000		4.3920	IN.	
△	1.981				2.4000	IN.	
▽	3.440				0.0000	IN.	
◇	4.959				0.0000	IN.	
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LONGITUDINAL STABILITY

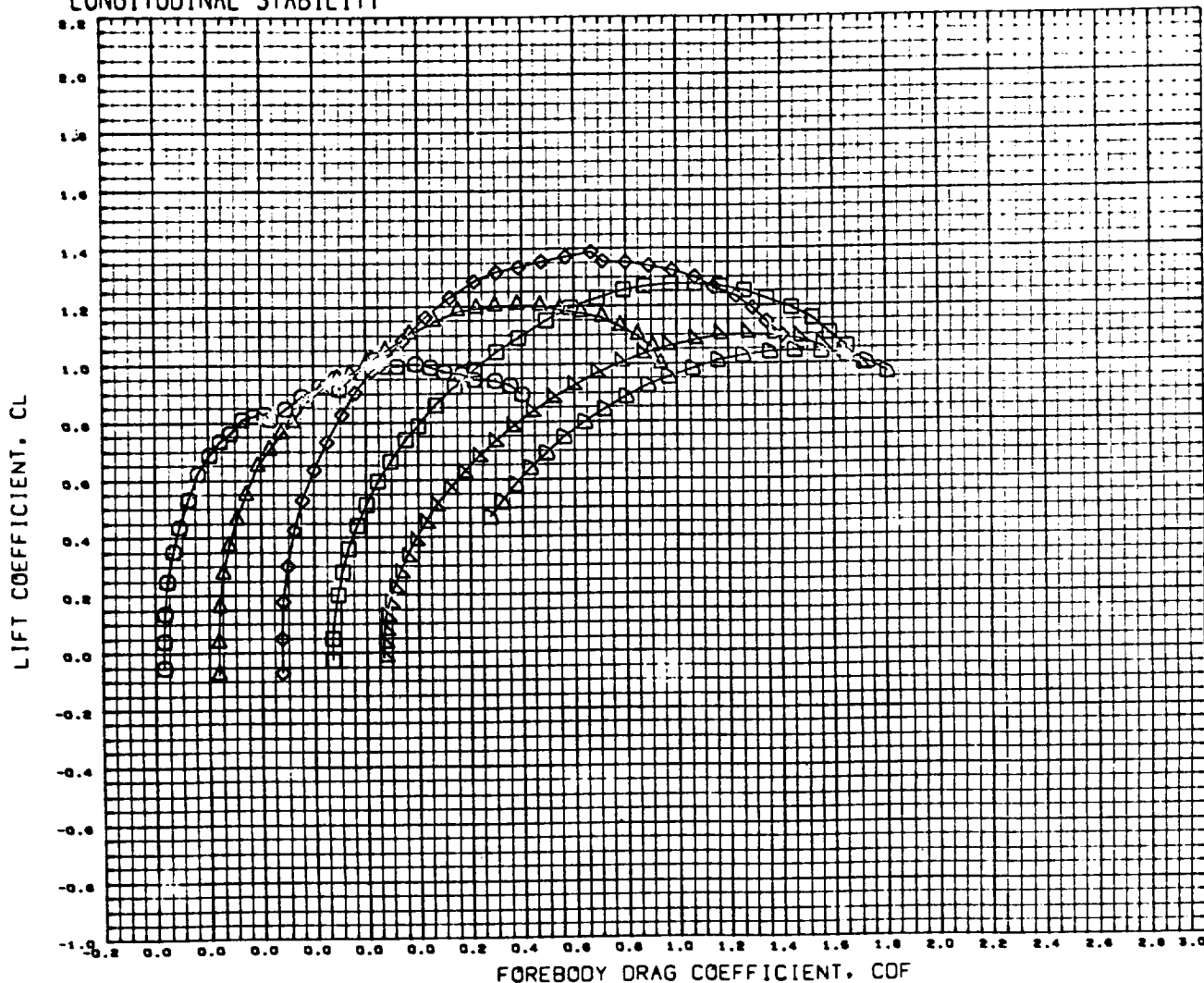


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR		SREF		
0.599	0.599	0.000	0.000	0.000		7.7005	sq. in.	
	0.900	0.000	0.000	0.000		3.1700	in.	
	1.201	0.000	0.000	0.000		4.3920	in.	
	1.961					2.4000	in.	
	3.480					0.0000	in.	
4.959	4.959					0.0000	in.	
		DATA HIST. CODE	*E*G			SCALE	0.0025	
M496-MSFC	AR11981-3	MODEL	W9B2V1	(F3823X)	06 SEP 72	PAGE	37	



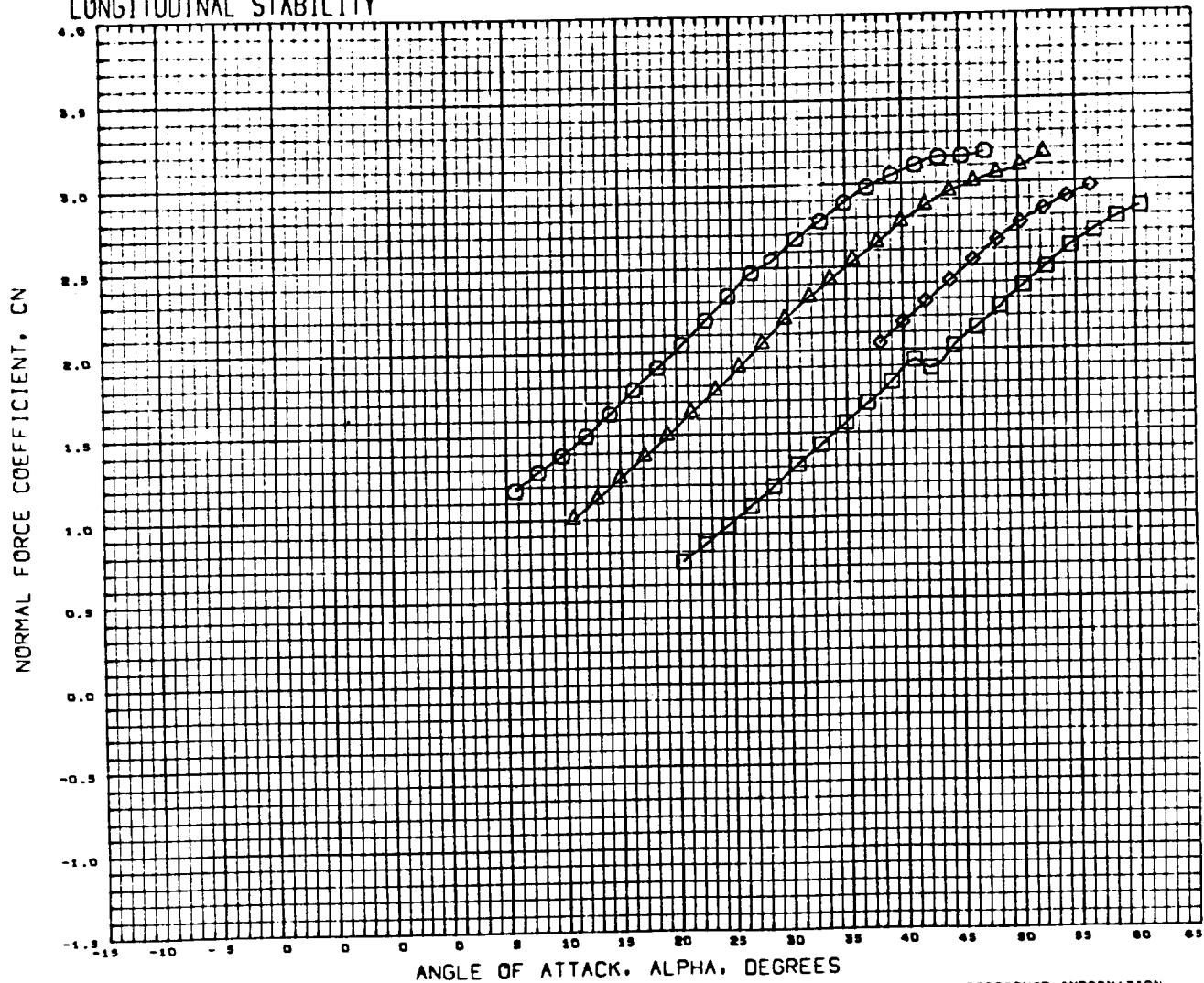
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○	0.599	0.000	0.000	0.000	0.000	LREF	3.1700	IN.
◇	0.900	0.000	0.000	0.000	0.000	BREF	4.3920	IN.
□	1.201	0.000	0.000	0.000	0.000	XMRP	2.4000	IN.
◇	1.981					YMRP	0.0000	IN.
□	3.480					ZMRP	0.0000	IN.
◇	4.999					SCALE	0.0029	
		DATA HIST. CODE	4E+6					
M496-MSFC		AR1198I-3	MODEL	W982V1	(F3823X)	06 SEP 72	PAGE	38

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	0.000	SREF	7.7003	SQ. IN.
○	0.999	0.000	0.000	0.000	0.000	LREF	3.1700	IN.
△	0.900	0.000	0.000	0.000	0.000	BREF	4.3920	IN.
◇	1.201	0.000	0.000	0.000	0.000	XMRP	2.4000	IN.
◊	1.901	0.000	0.000	0.000	0.000	YMRP	0.0000	IN.
◈	3.450	0.000	0.000	0.000	0.000	ZMRP	0.0000	IN.
◉	4.999	0.000	0.000	0.000	0.000	SCALE	0.0025	IN.
DATA HIST. CODE *E*G								
M496-MSFC	AR1198[-3	MODEL	W9B2V1	(F3823X)	06 SEP 72	PAGE	40	

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR			
○	1.196	0.000	0.000	0.000		BREF	4.6225 50. IN.
△	1.949	0.000	0.000	0.000		LREF	1.5360 IN.
◇	3.480	0.000	0.000	0.000		BREF	4.3000 IN.
□	4.950	0.000	0.000	0.000		XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE MREG

M496-MSFC

AR11981-3

MODEL

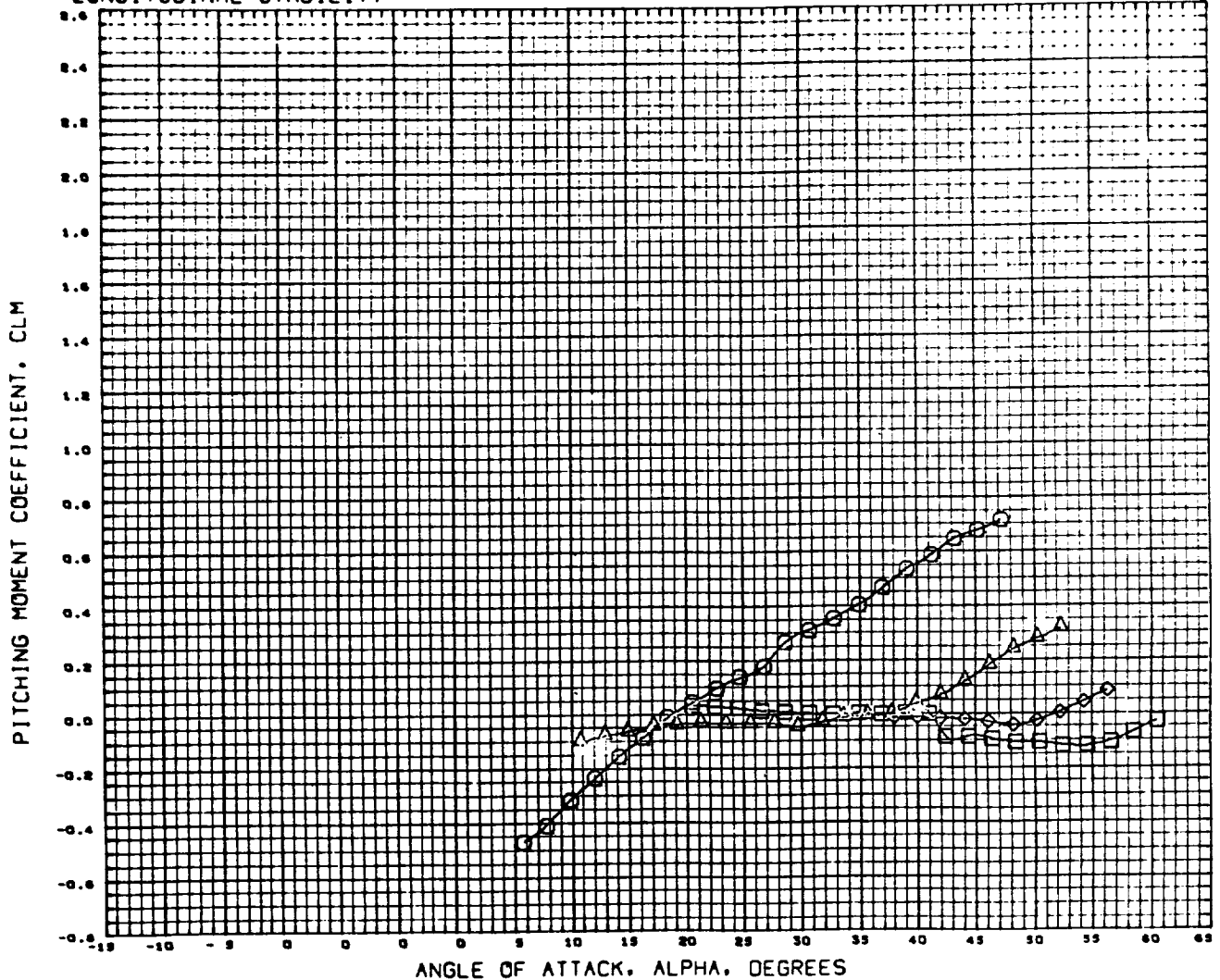
W6B2

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LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	SCALE	SREP	IN.
○	1.196	0.000	0.000	0.000		4.6225	30. IN.
△	1.949	0.000	0.000	0.000		1.3380	IN.
□	3.480	0.000	0.000	0.000		4.3000	IN.
◇	4.950	0.000	0.000	0.000		2.4000	IN.
						0.0000	IN.
						0.0000	IN.
						0.0025	IN.

DATA HIST. CODE H#ENG

M496-MSFC

AR11981-3

MODEL

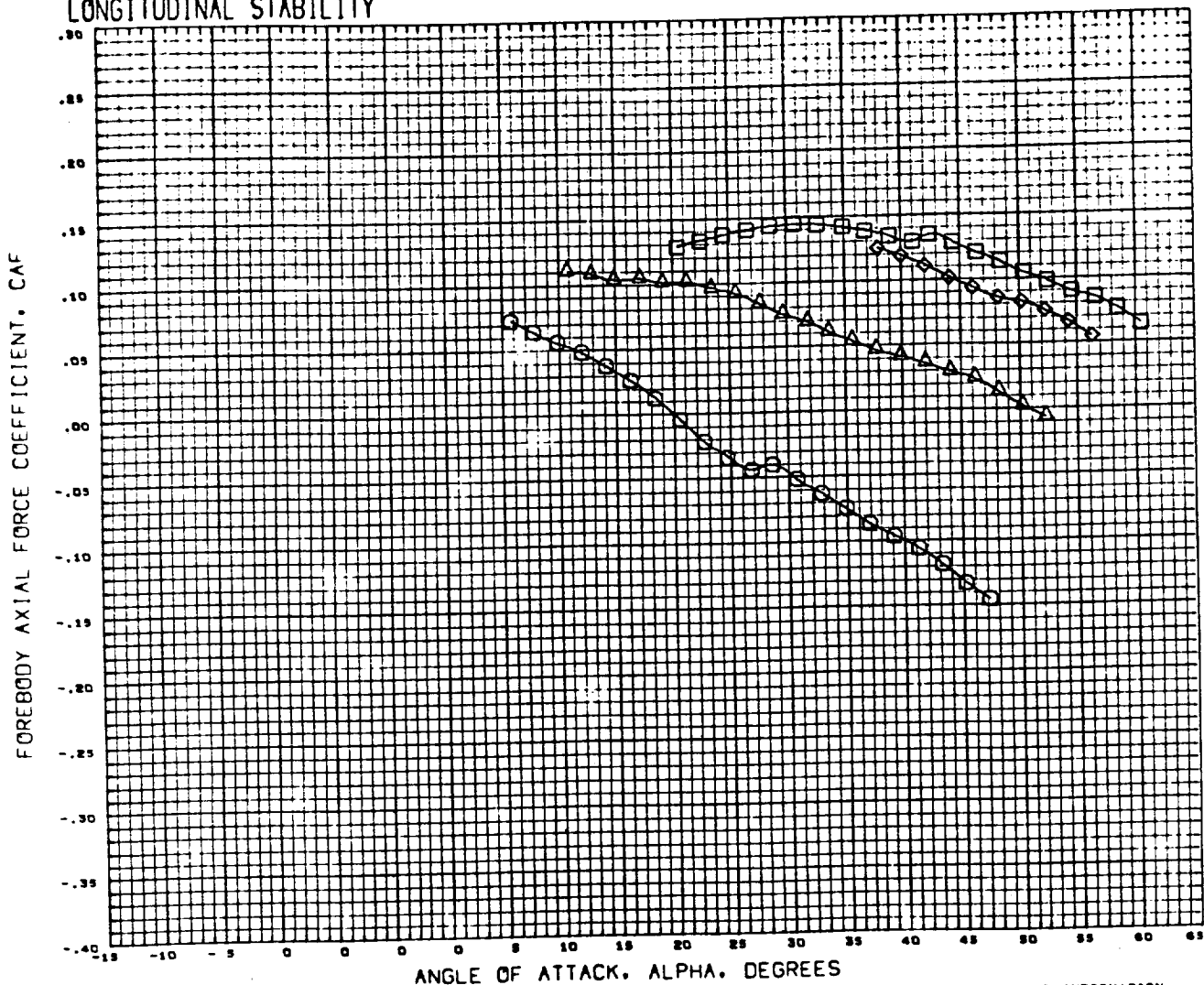
W6B2

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LONGITUDINAL STABILITY



SYMBOL	PARAMETRIC VALUES			
	MACH	BETA	DEL	ELEVTR
○	1.196	0.000	0.000	0.000
△	1.949	0.000	0.000	0.000
◇	3.480	0.000	0.000	0.000
□	4.950	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	4.6225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE M496

M496-MSFC

AR11981-3

MODEL

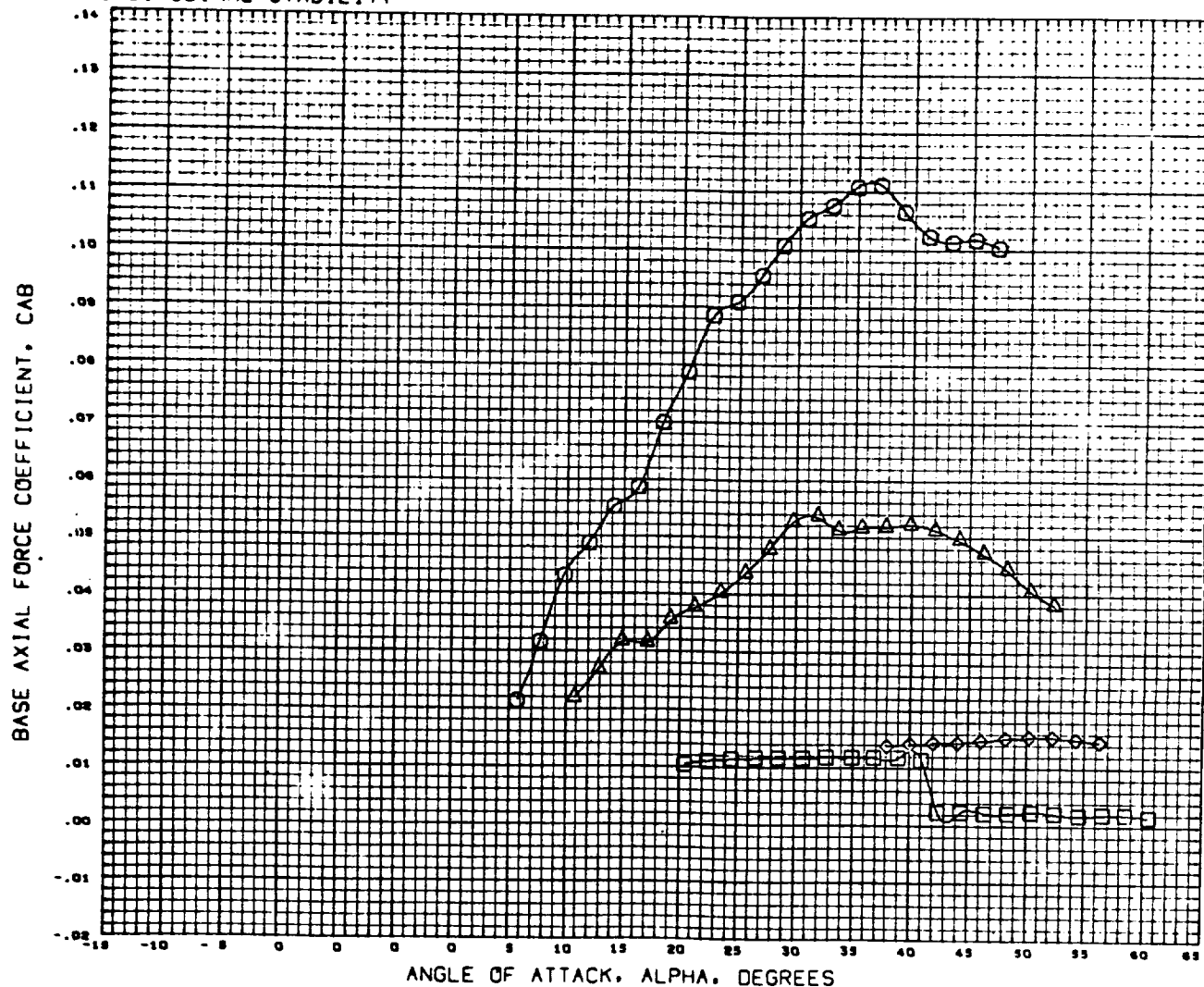
W6B2

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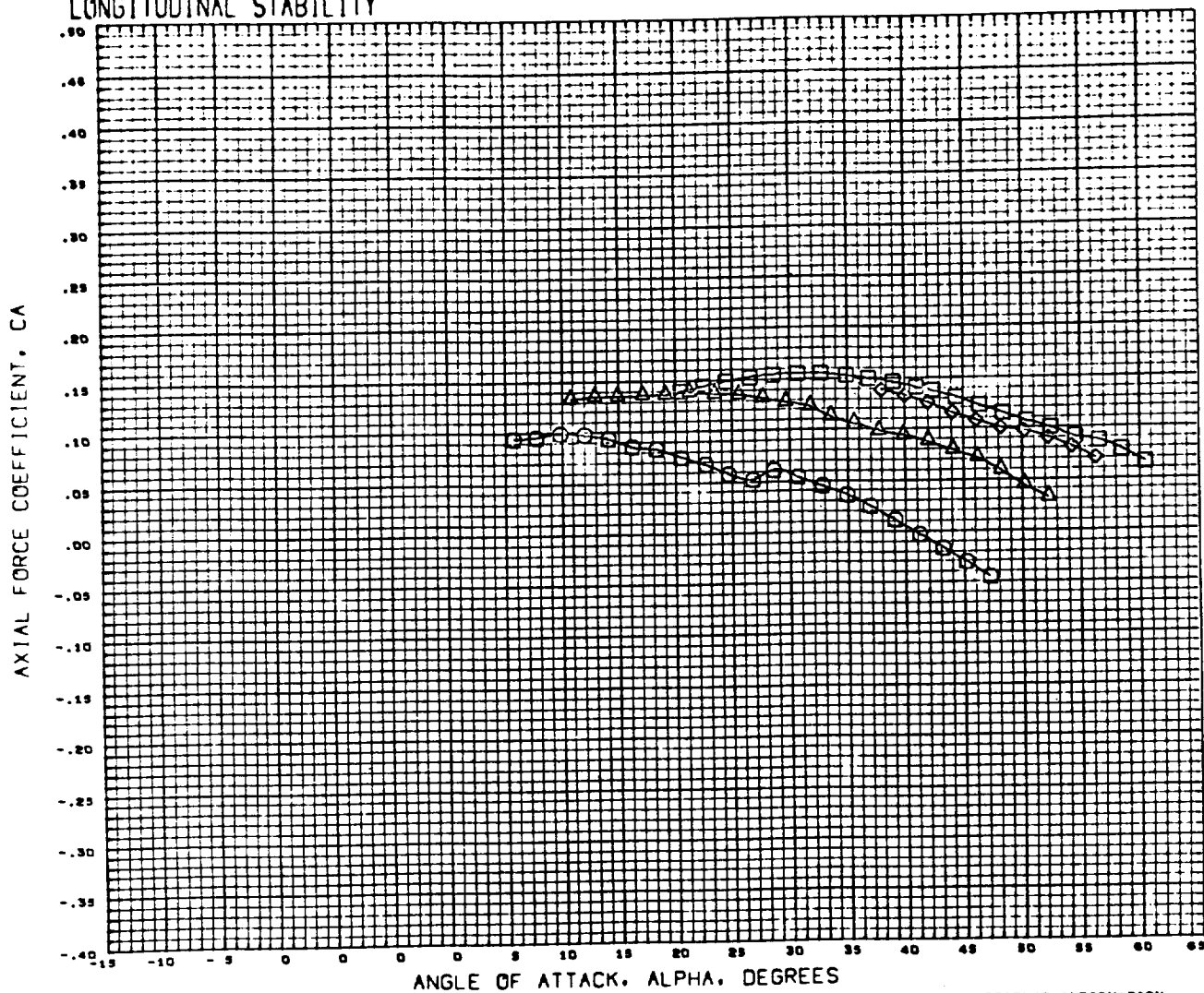
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR		SREF	sq. in.	
○	1.196	0.000	0.000	0.000		LREF	1.5360	IN.
◇	1.949	0.000	0.000	0.000		BREF	4.3000	IN.
△	3.480	0.000				XMRP	2.4000	IN.
□	4.950					YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE M=ENG

LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	DEL	0.000	0.000
○	1.196	0.000	DEL	0.000	0.000
△	1.949	0.000	ELEVTR	0.000	0.000
◇	3.490	ATLRON	0.000		
□	4.950				

DATA HIST. CODE M0E0G

REFERENCE INFORMATION		
SREP	4.6225	50. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

M496-MSFC

AR11981-3

MODEL

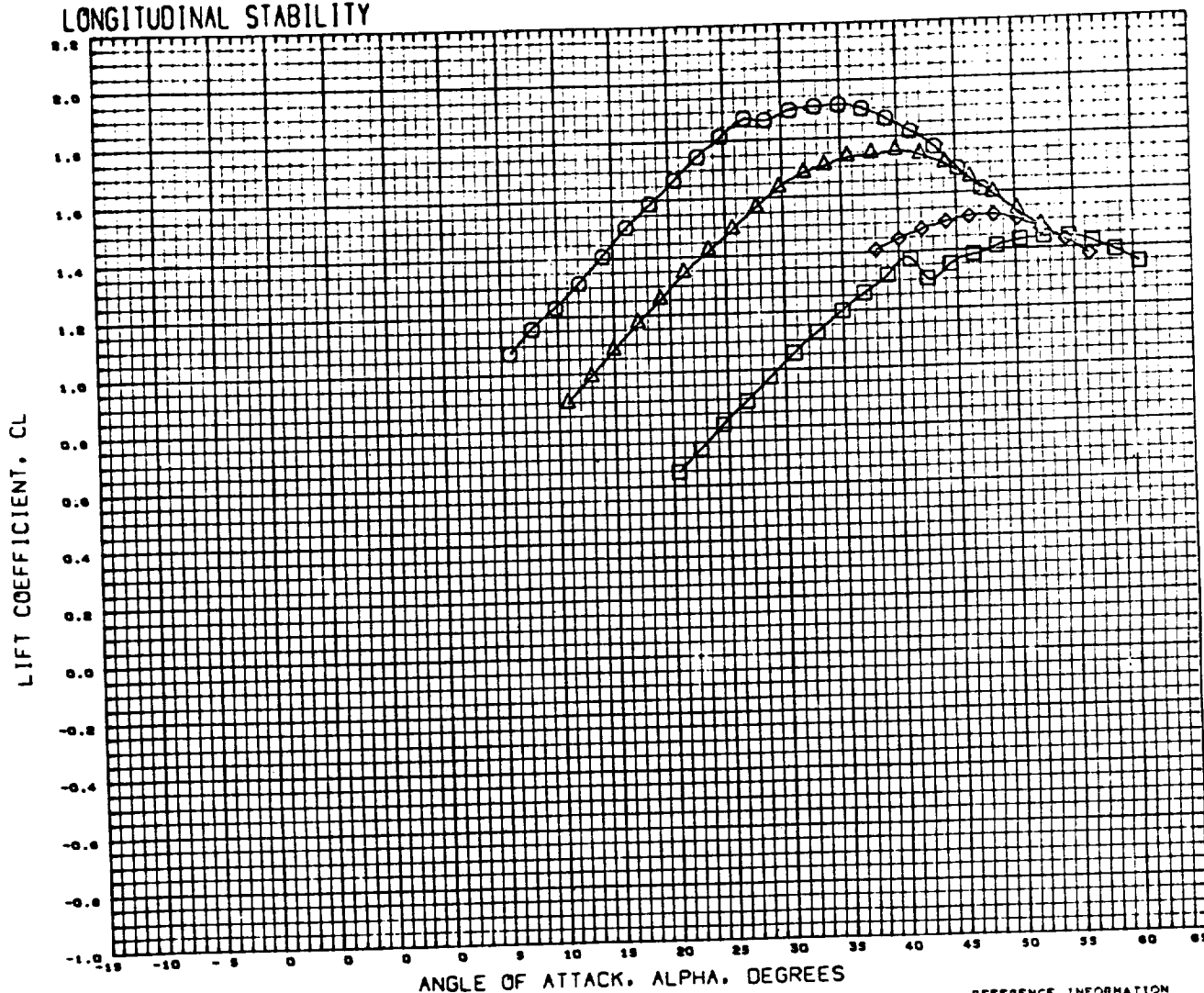
W6B2

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	0.000
○	1.196	0.000	DEL	0.000	
△	1.949	0.000	ELEVTR	0.000	
◇	3.480	0.000			
□	4.990	0.000			

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE M+E+6

M496-MSFC

AR11981-3

MODEL

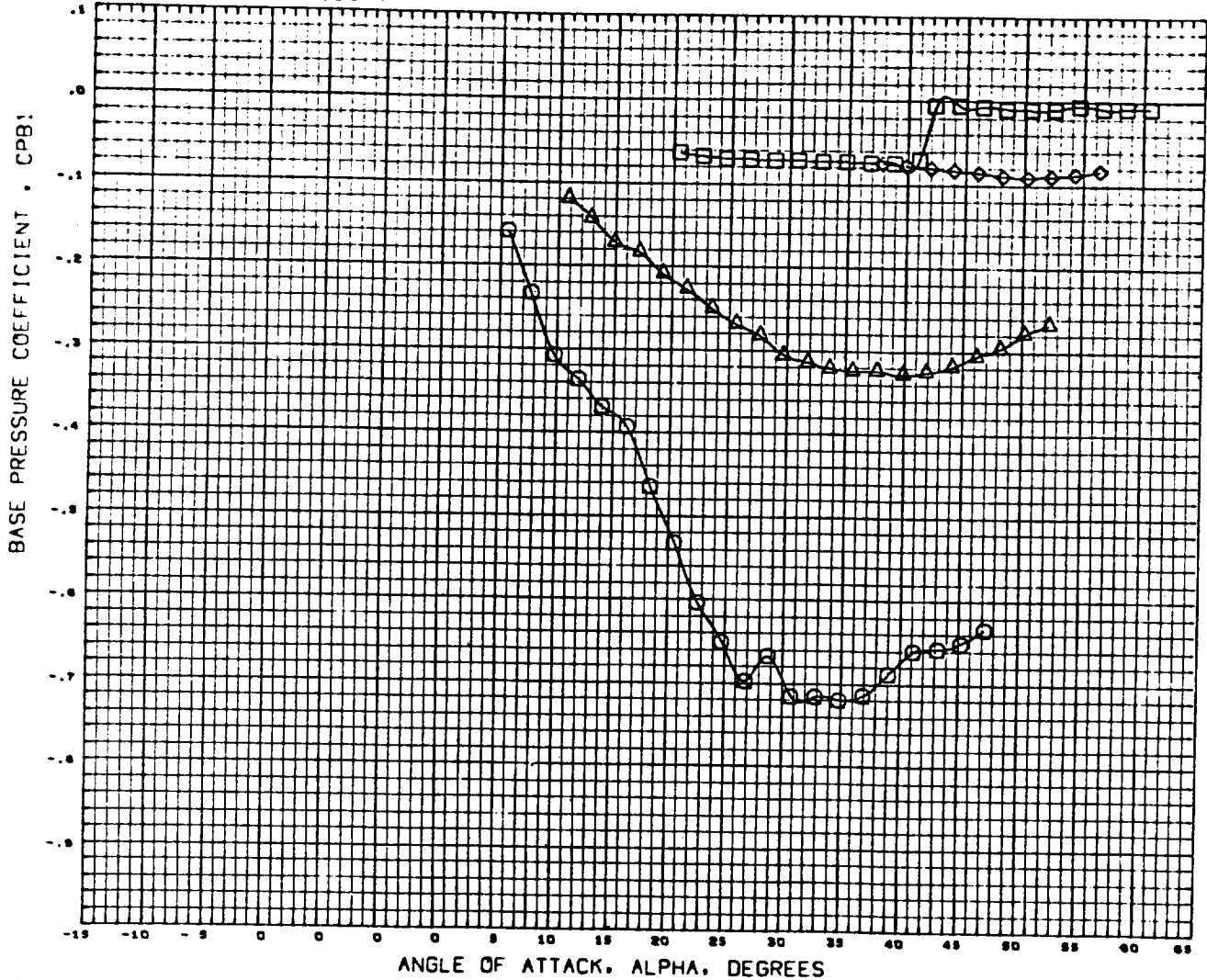
W682

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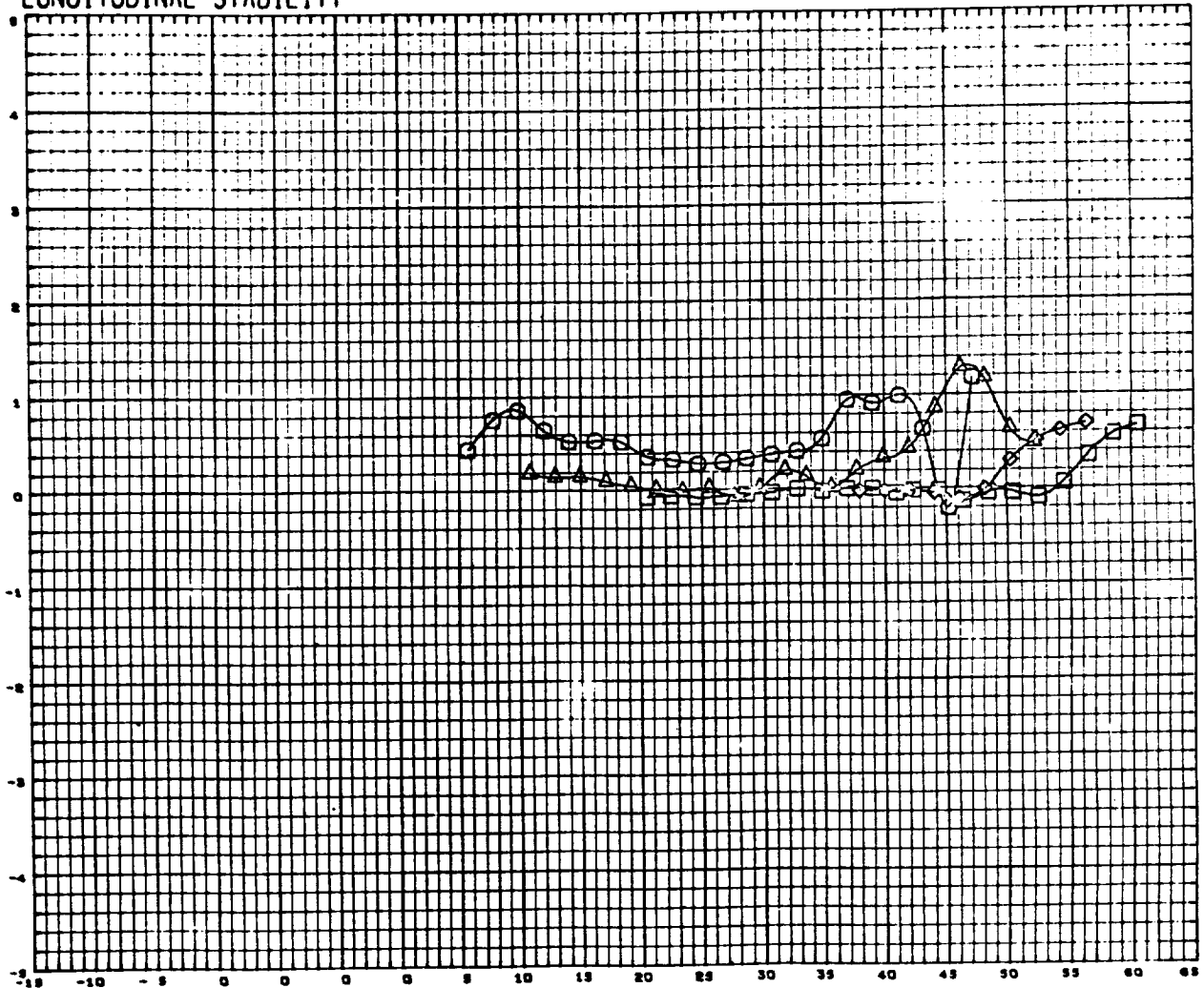
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR			
○	1.196	0.000	0.000	0.000		BREF	4.0225
△	1.949	0.000	0.000	0.000		LREF	1.9360
◇	3.460	0.000	0.000	0.000		BREF	4.3000
□	4.950	0.000	0.000	0.000		XMRF	2.4000
						YMRF	0.0000
						ZMRF	0.0000
						SCALE	0.0025

LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • $\partial C_L / \partial \alpha$



ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL
○
△
◇
□

MACH
1.198
1.949
3.480
4.990

BETA
DER
AILRON

PARAMETRIC VALUES
0.000 DEL
0.000 ELEVTR
0.000

0.000
0.000

REFERENCE INFORMATION

SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE M4E+G

M496-MSFC

AR11981-3

MODEL

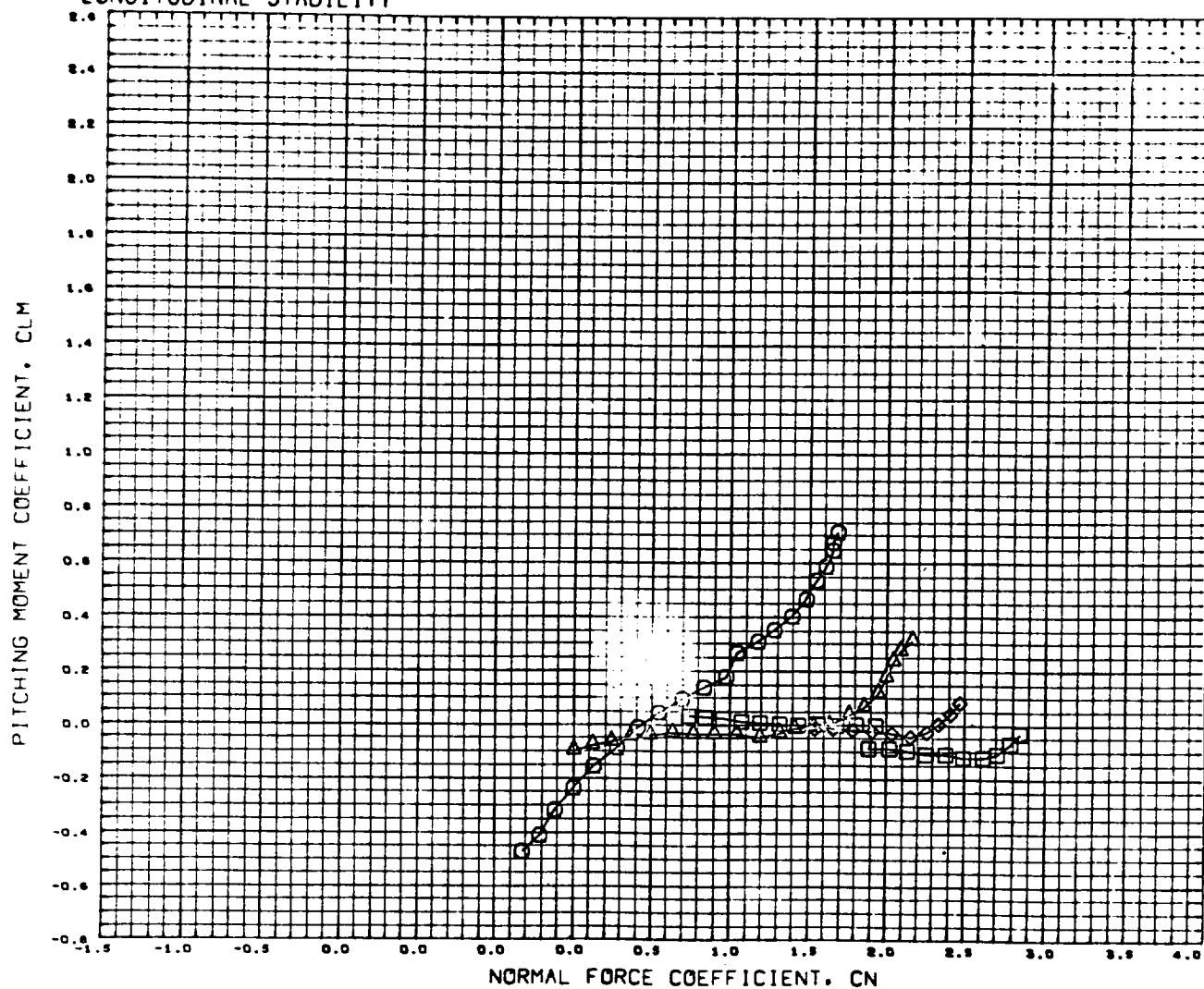
W682

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48

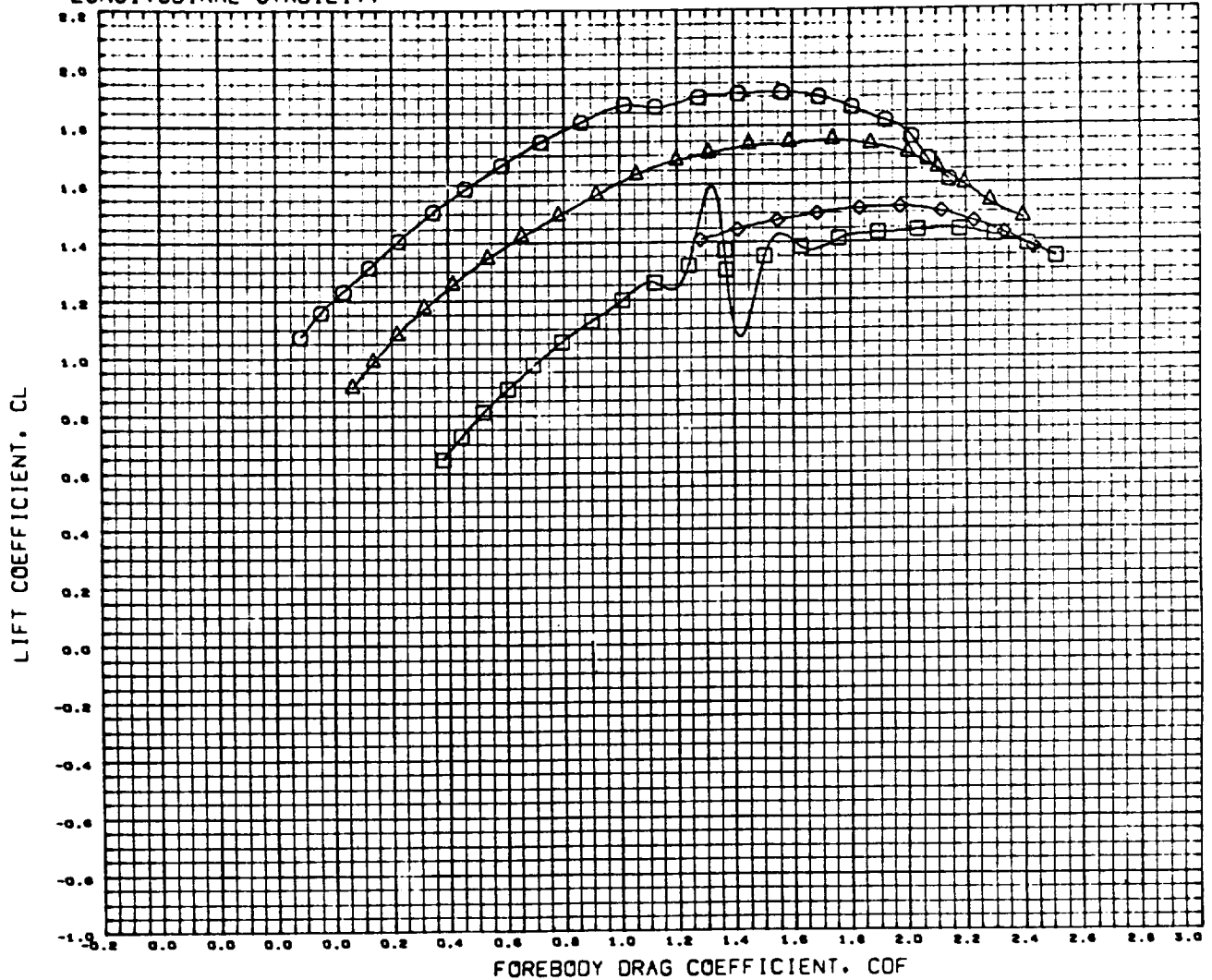
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR		SREF	LRFP	IN.
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△	1.949	0.000	0.000	0.000		4.3000	2.4000	IN.
◇	3.480	0.000	0.000	0.000		0.0000	0.0000	IN.
□	4.990	0.000	0.000	0.000		0.0000	0.0025	IN.

DATA HIST. CODE M*E*G
M496-MSFC AR11981-3 MODEL W682 (F3806X) 06 SEP 72 PAGE 49

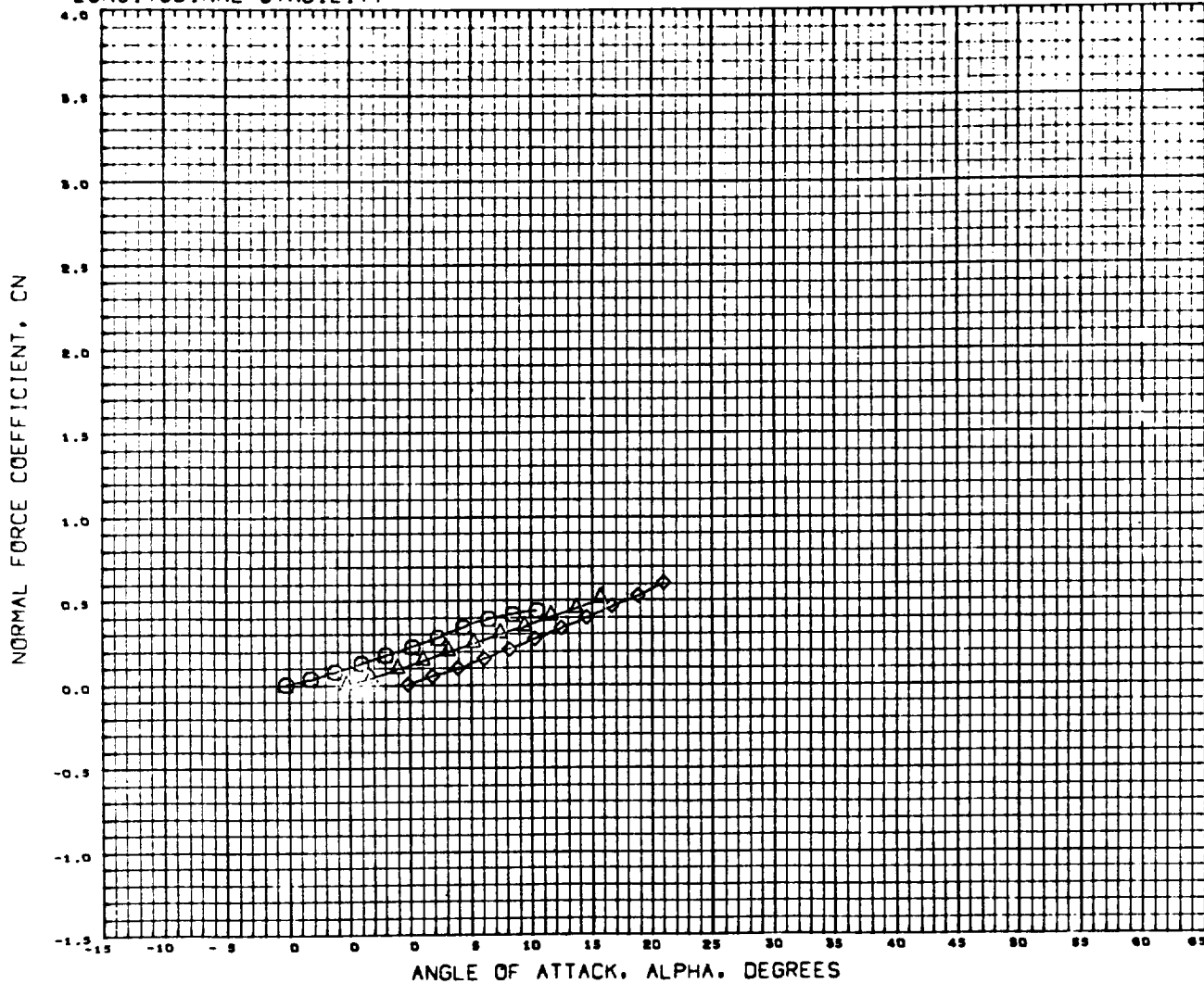
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR		SREP	
○	1.196	0.000	0.000	0.000		4.8225	50. IN.
△	1.949	0.000	0.000	0.000		1.3380	IN.
◇	3.480	0.000	0.000	0.000		4.3000	IN.
□	4.990	0.000	0.000	0.000		2.4000	IN.
						YNRP	0.0000 IN.
						ZNRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE M496 MSFC AR11981-3 MODEL W682 (F3806X) 06 SEP 72 PAGE 50

LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	
○	0.999		0.000	CANARD 0.000
△	0.899			
◇	1.198			

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE RE

M496-MSFC

AR11981-3

MODEL

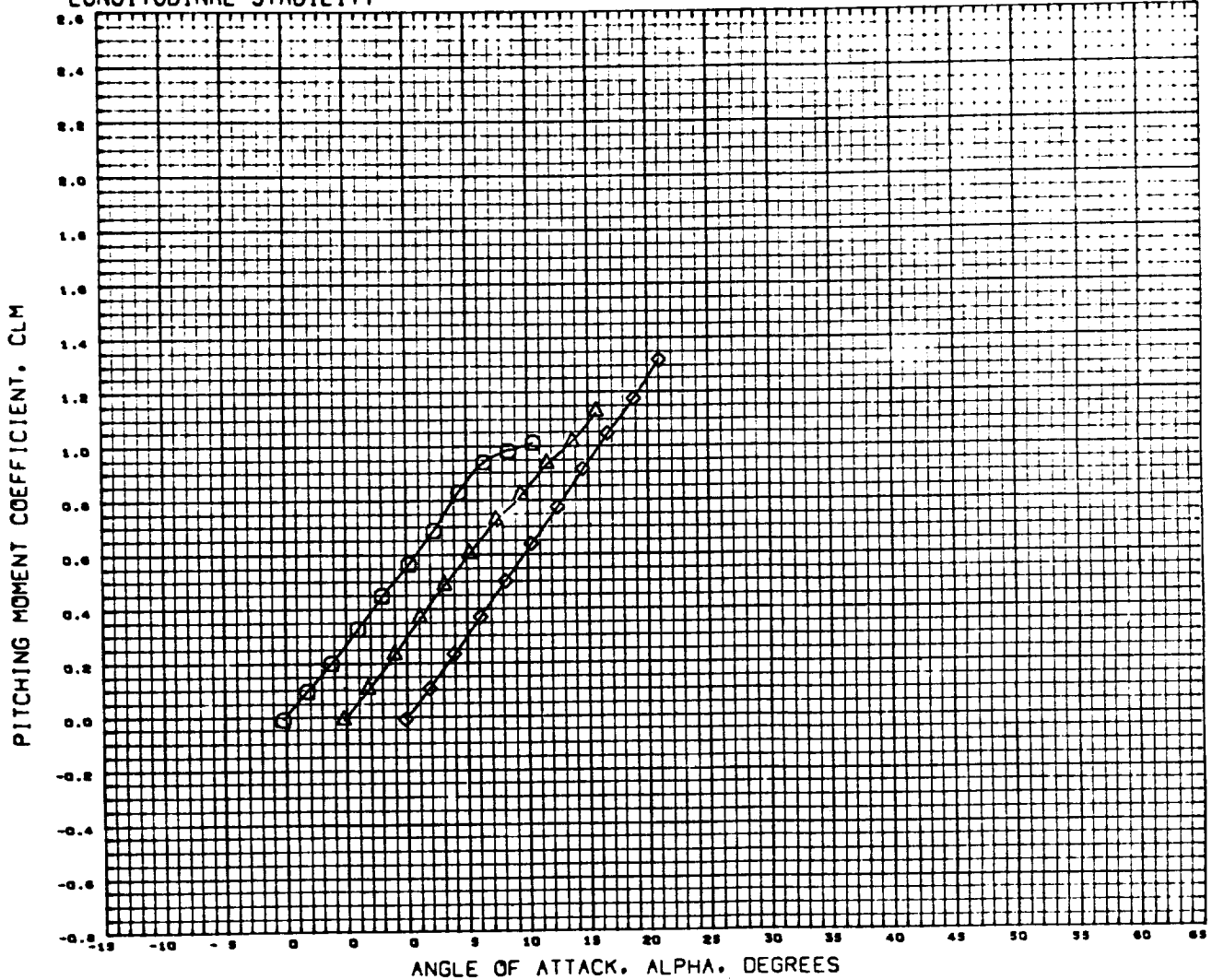
B2C12

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LONGITUDINAL STABILITY



SYMBOL
○
△
◇

MACH
0.999
0.999
1.198

BETA

PARAMETRIC VALUES

0.000 CANARD 0.000

REFERENCE INFORMATION

SREF	4.6225	50. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

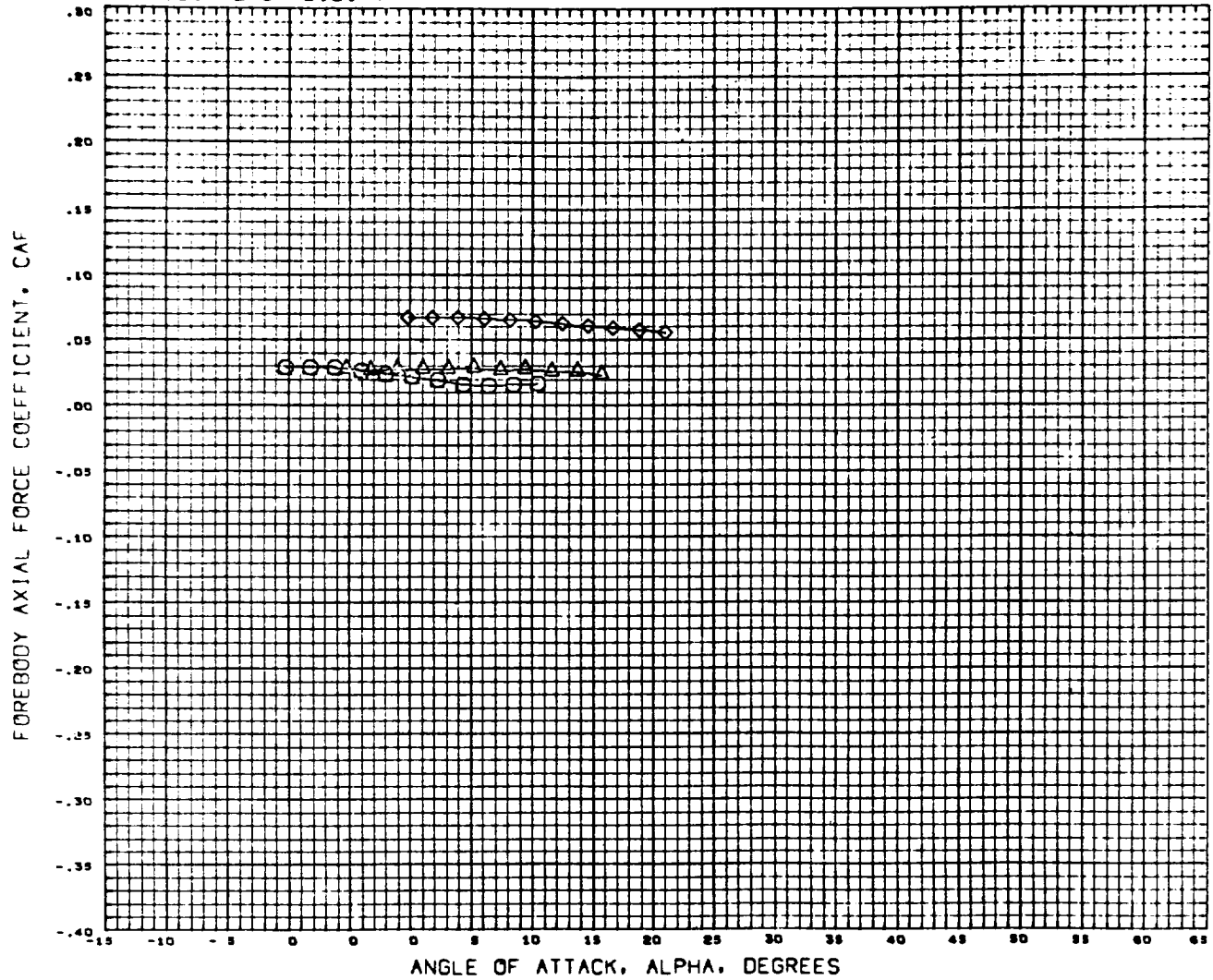
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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.599	0.000	CANARD 0.000
△	0.899		
◇	1.198		

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

B2C12

(E3802A)

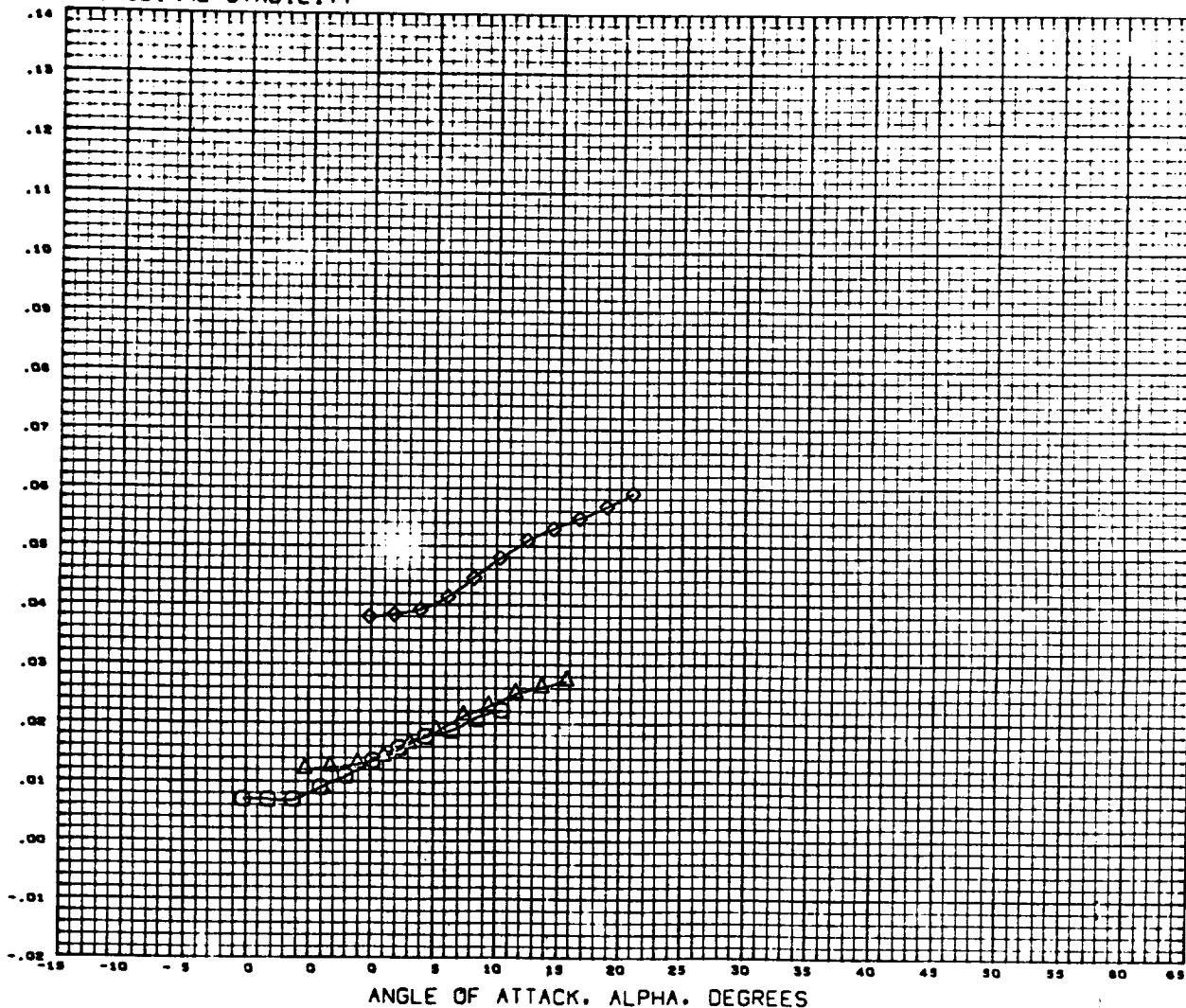
06 SEP 72

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LONGITUDINAL STABILITY

BASE AXIAL FORCE COEFFICIENT, C_{AB}



SYMBOL
○
◇

MACH
0.999
0.999
1.198

BETA

PARAMETRIC VALUES
0.000 CANARD 0.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
GREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

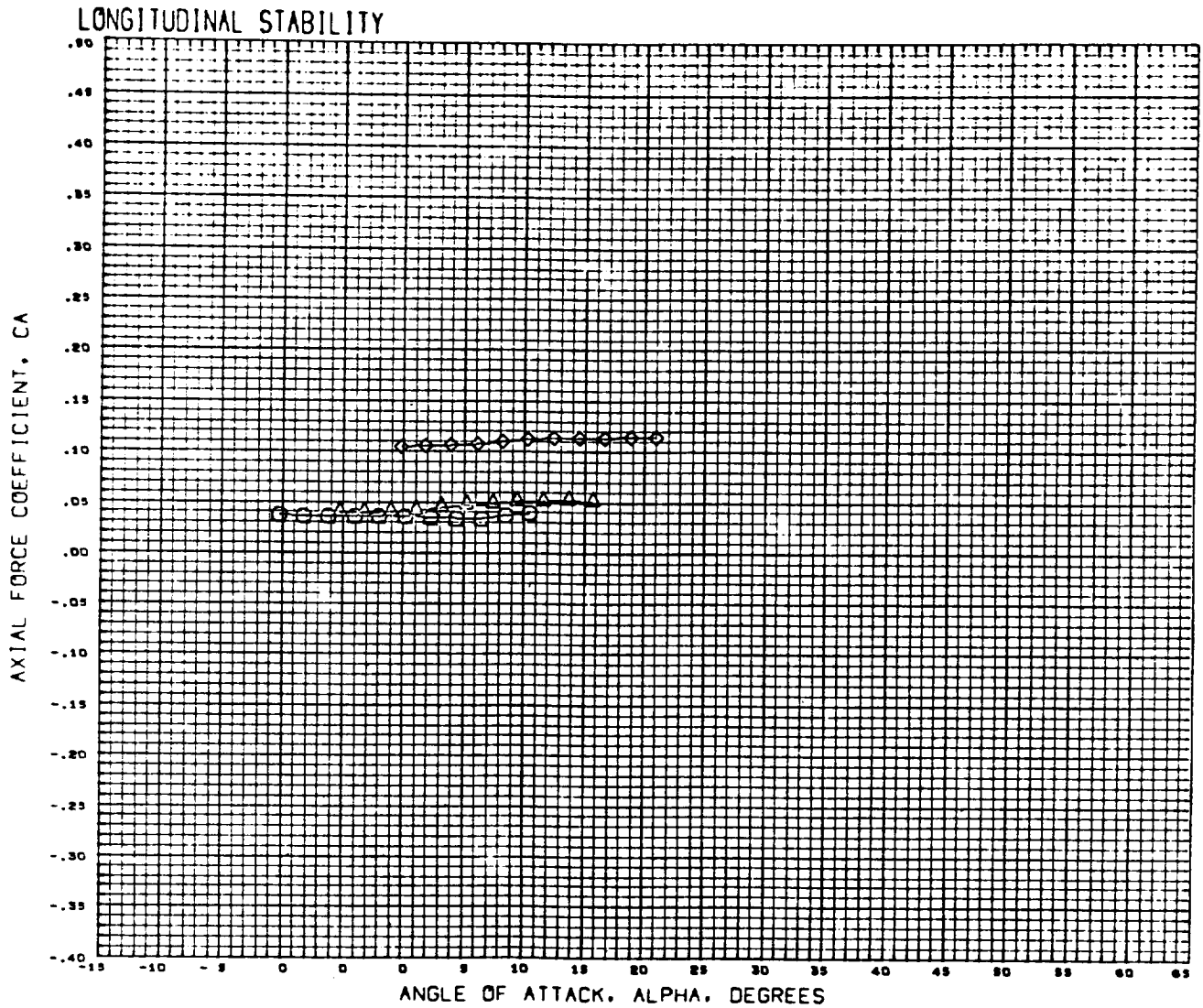
B2C12

(E3802A)

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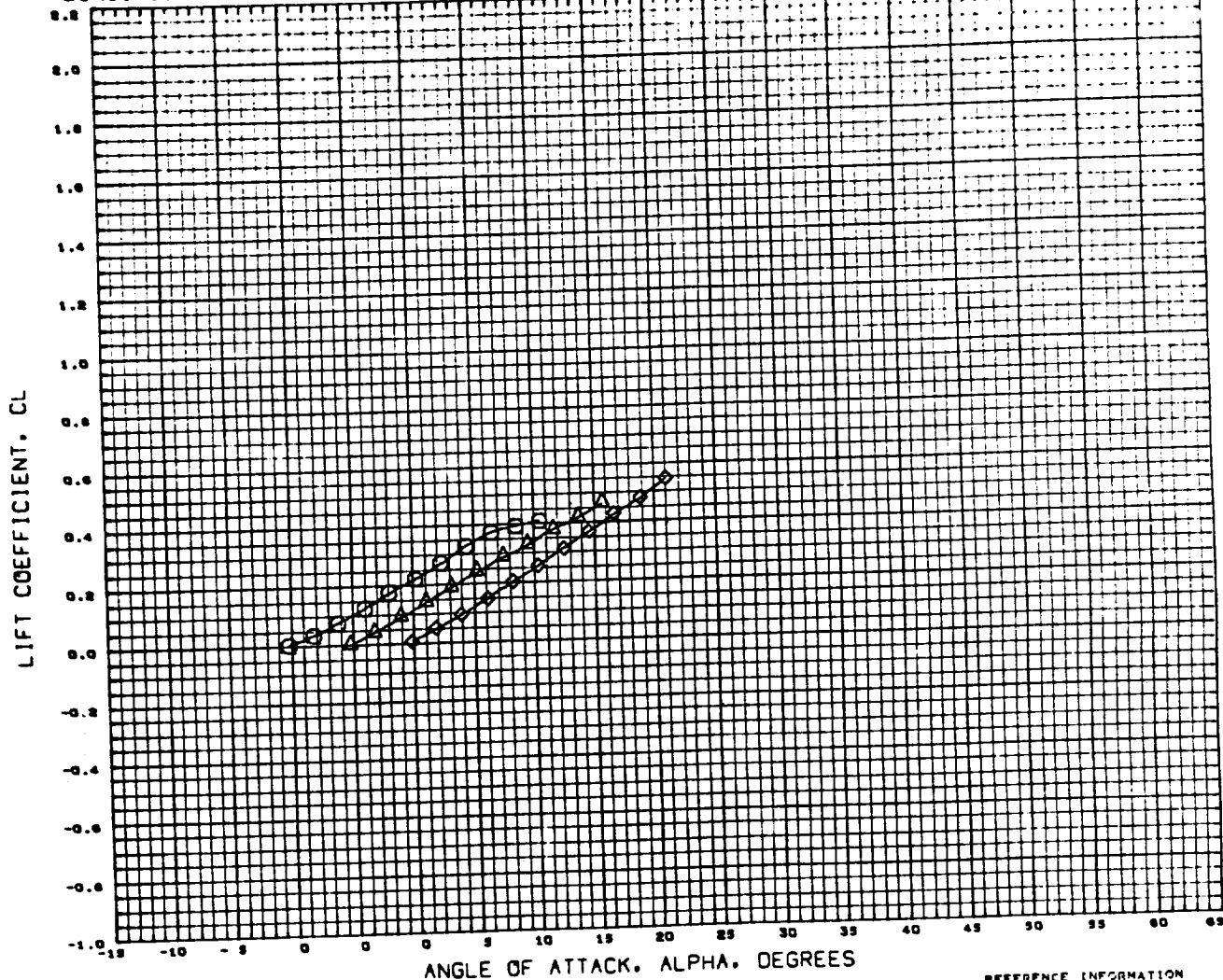
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○	0.999		0.000	CANARD 0.000
△	0.899			
◇	1.199			

REFERENCE INFORMATION		
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LREF	1.8360	IN.
BREF	4.3000	IN.
WREF	2.4000	IN.
YREF	0.0000	IN.
ZREF	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL B2C12 (E3802A) 06 SEP 72 PAGE 55

LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	
	0.599		0.000	CANARD 0.000
	0.899			
	1.196			

REFERENCE INFORMATION		
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LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
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SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

B2C12

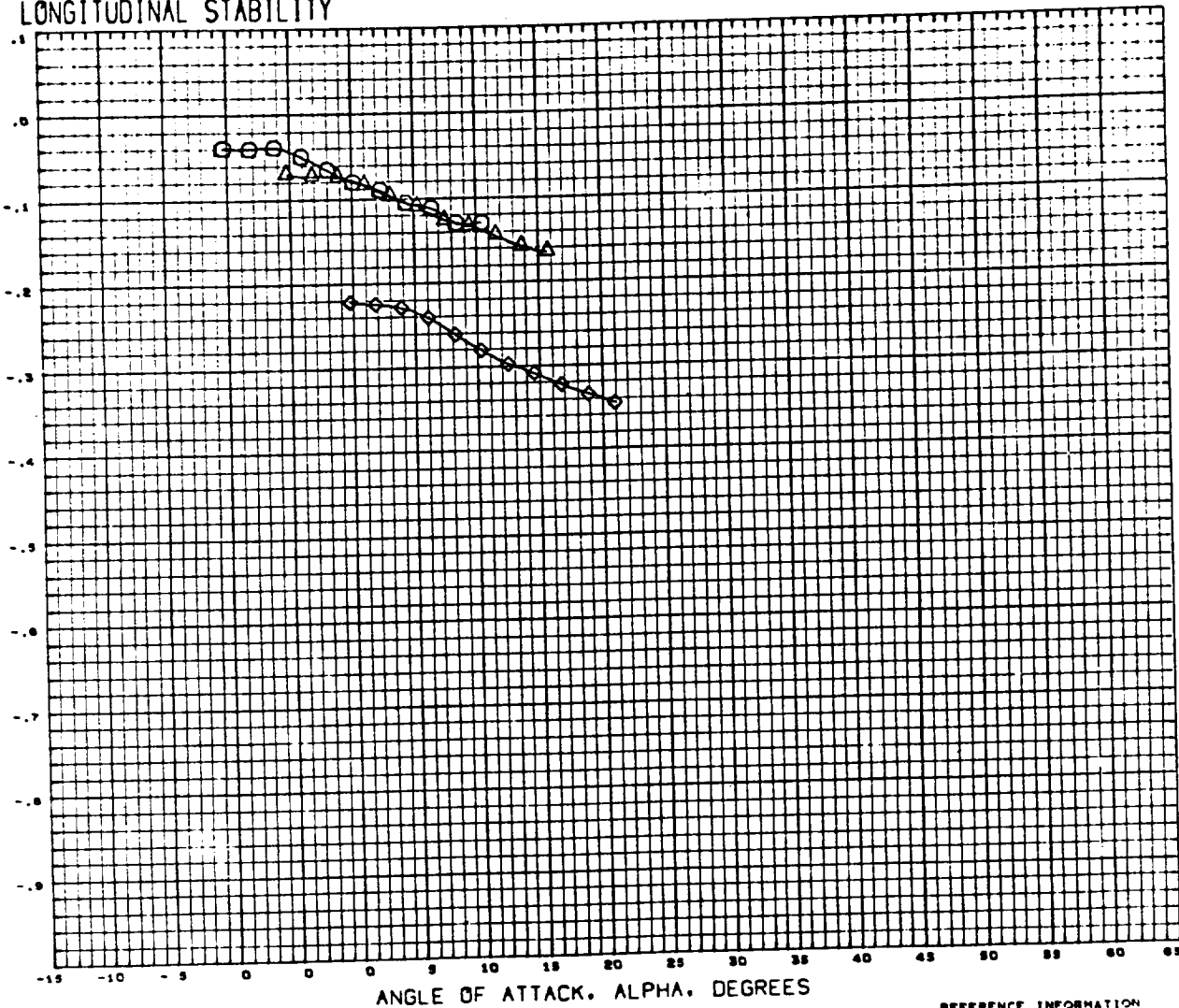
(E3802A) 06 SEP 72

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56

LONGITUDINAL STABILITY

BASE PRESSURE COEFFICIENT - CPB1



SYMBOL MACH BETA PARAMETRIC VALUES CANARD 0.000

○ 0.599 0.000

△ 0.899 0.000

◇ 1.199 0.000

REFERENCE INFORMATION

SREF 4.6225 30. IN.

LRFP 1.5360 IN.

BRFP 4.3000 IN.

XRFP 2.4000 IN.

YMRP 0.0000 IN.

ZMRP 0.0000 IN.

SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

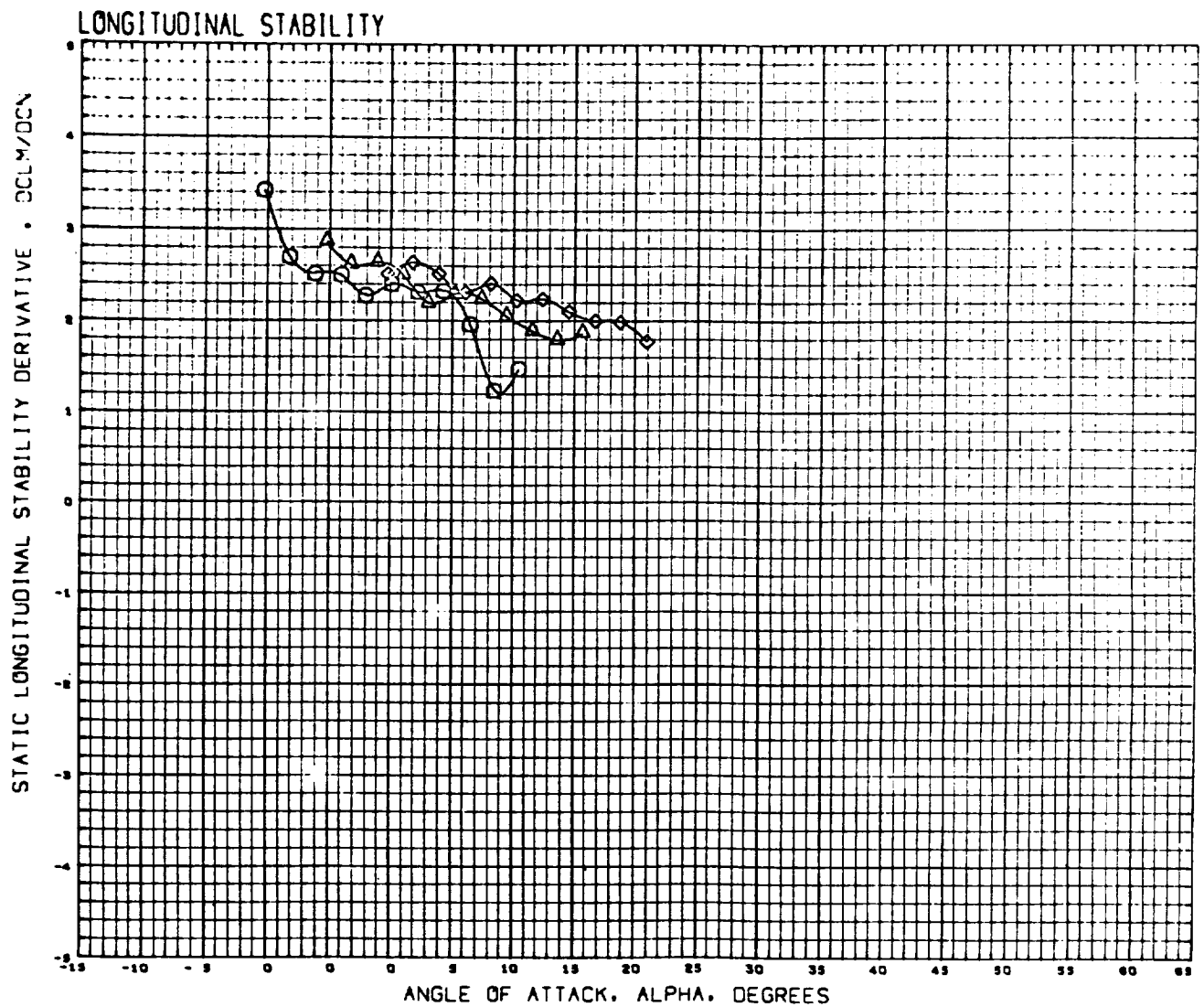
MODEL

B2C12

(E3802A) 06 SEP 72

PAGE

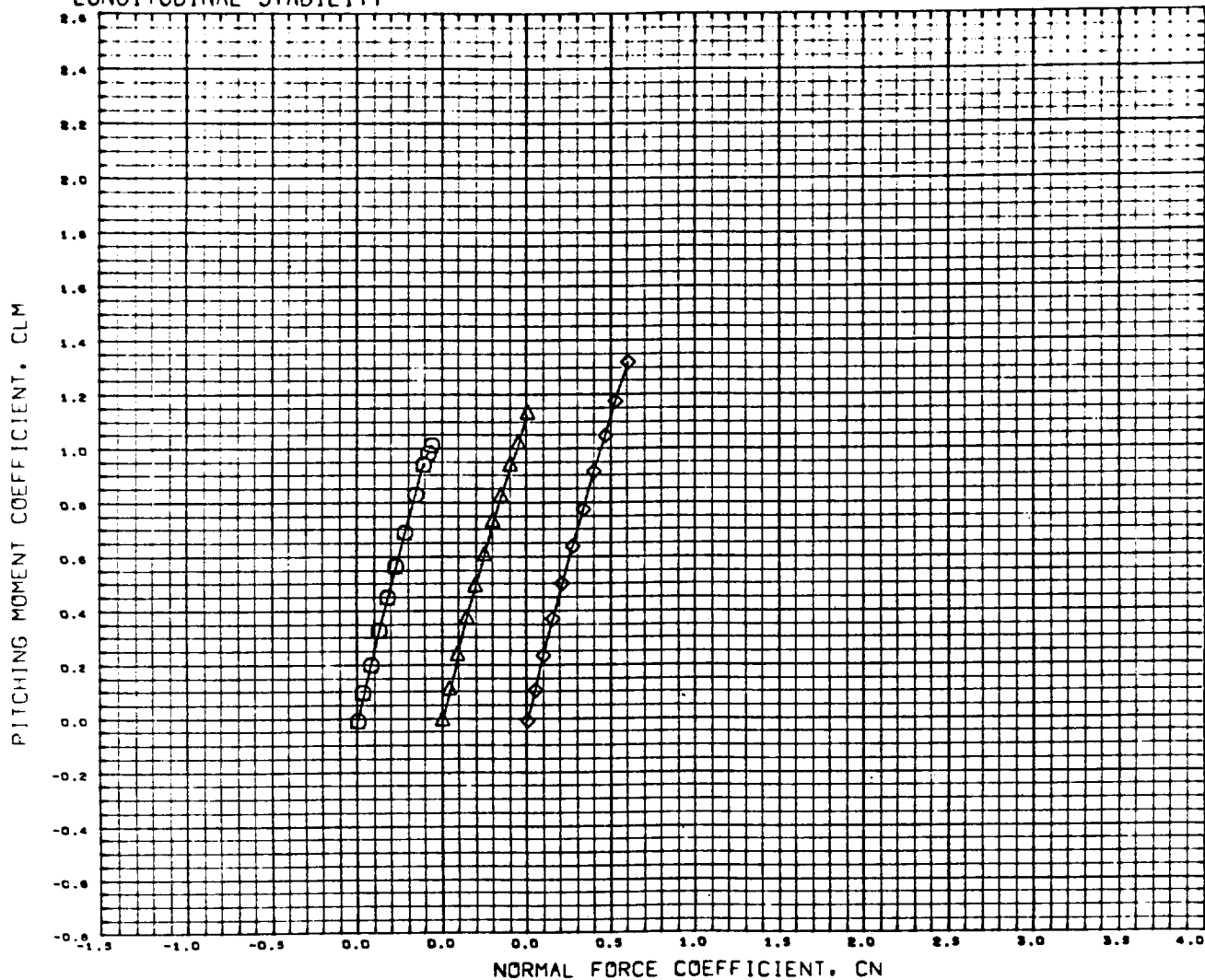
57



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△	0.899					LREF	1.5360	IN.
◇	1.198					BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

LONGITUDINAL STABILITY



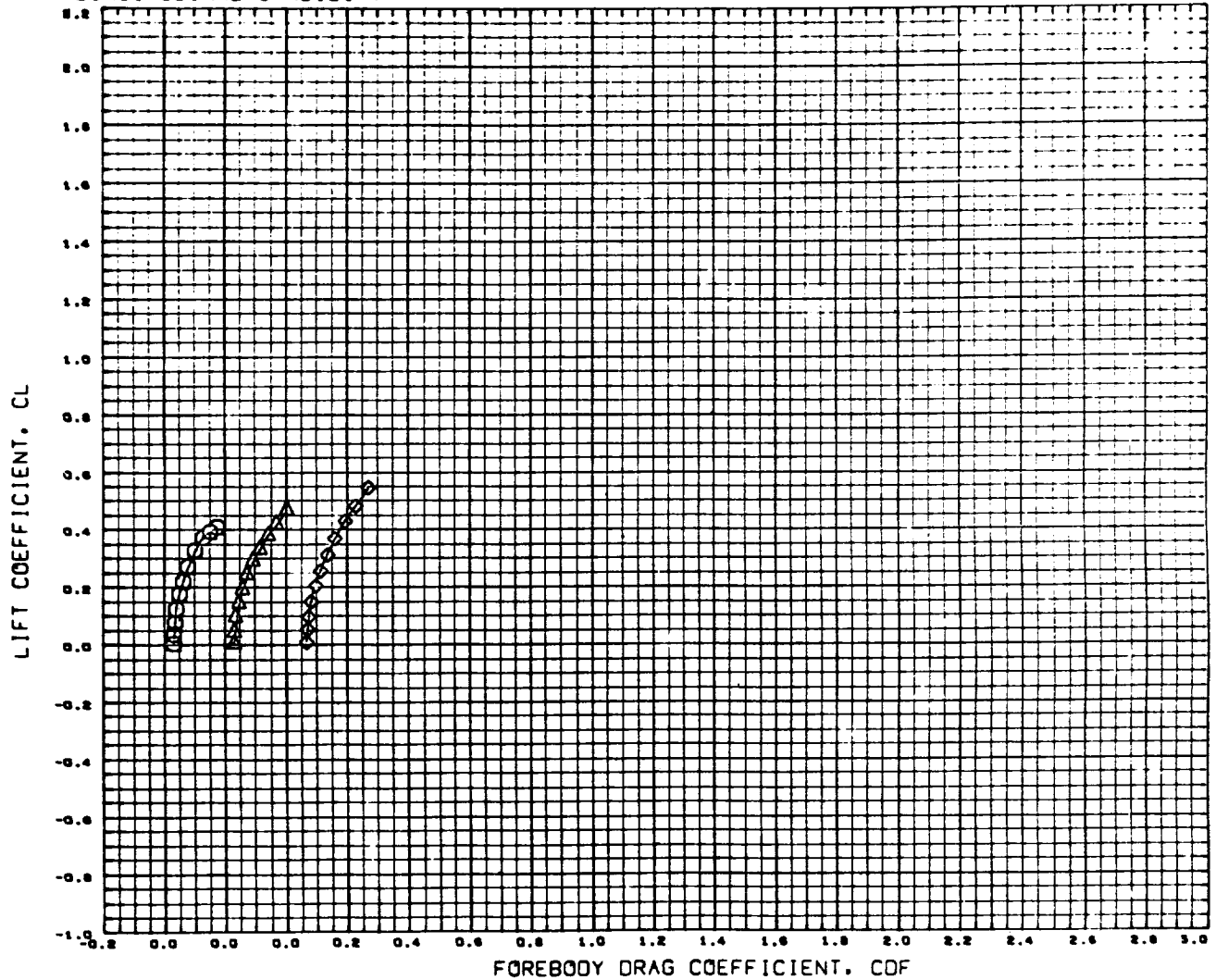
SYMBOL	MACH	PARAMETRIC VALUES		
○	0.599	BETA	0.000	CANARD
△	0.899			0.000
◇	1.198			

REFERENCE INFORMATION		
SREF	4.6225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	
○	0.999		0.000	CANARD
△	0.999		0.000	
◇	1.198		0.000	

REFERENCE INFORMATION		
SREF	4.6225	sq. in.
LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

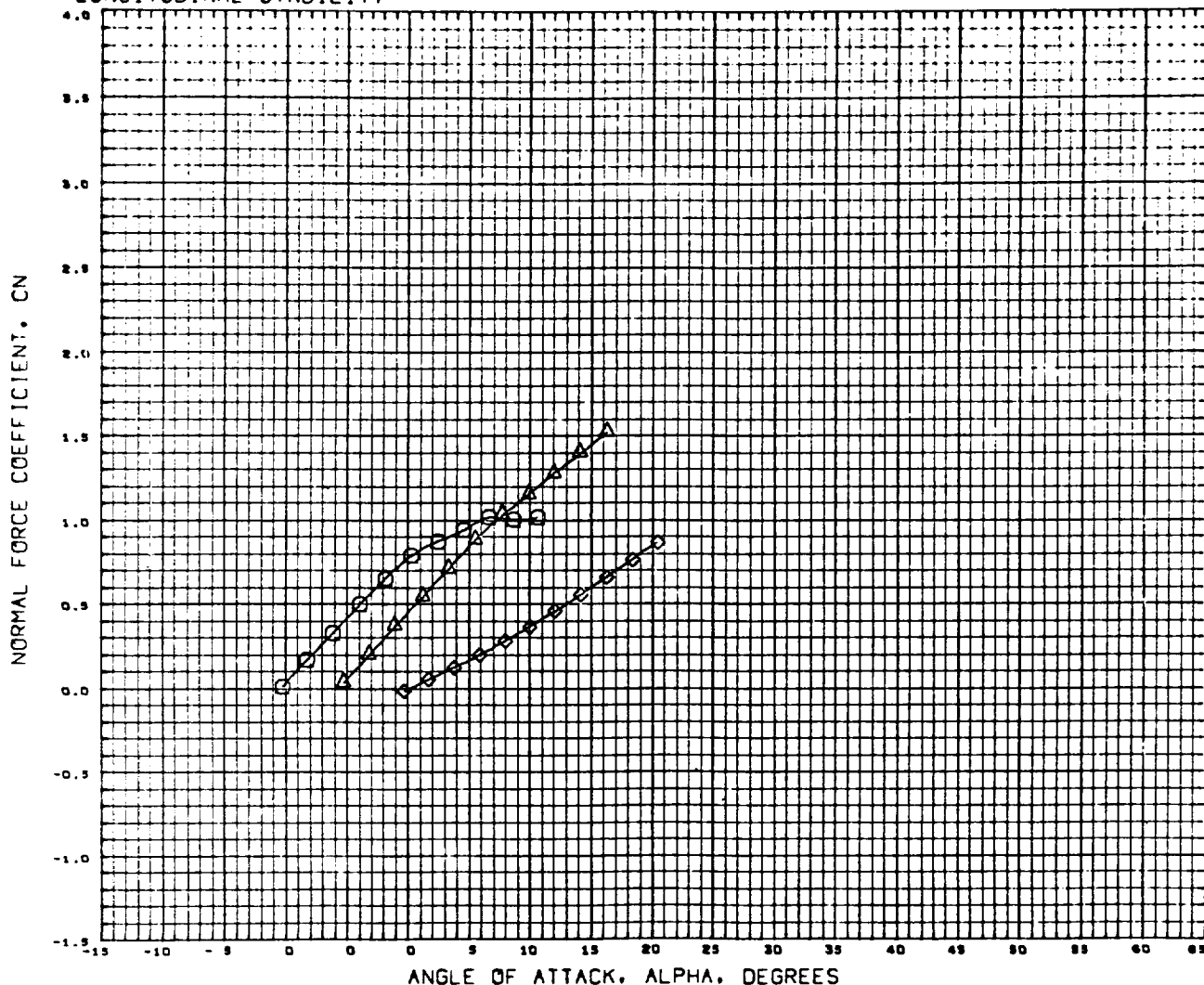
B2C12

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60

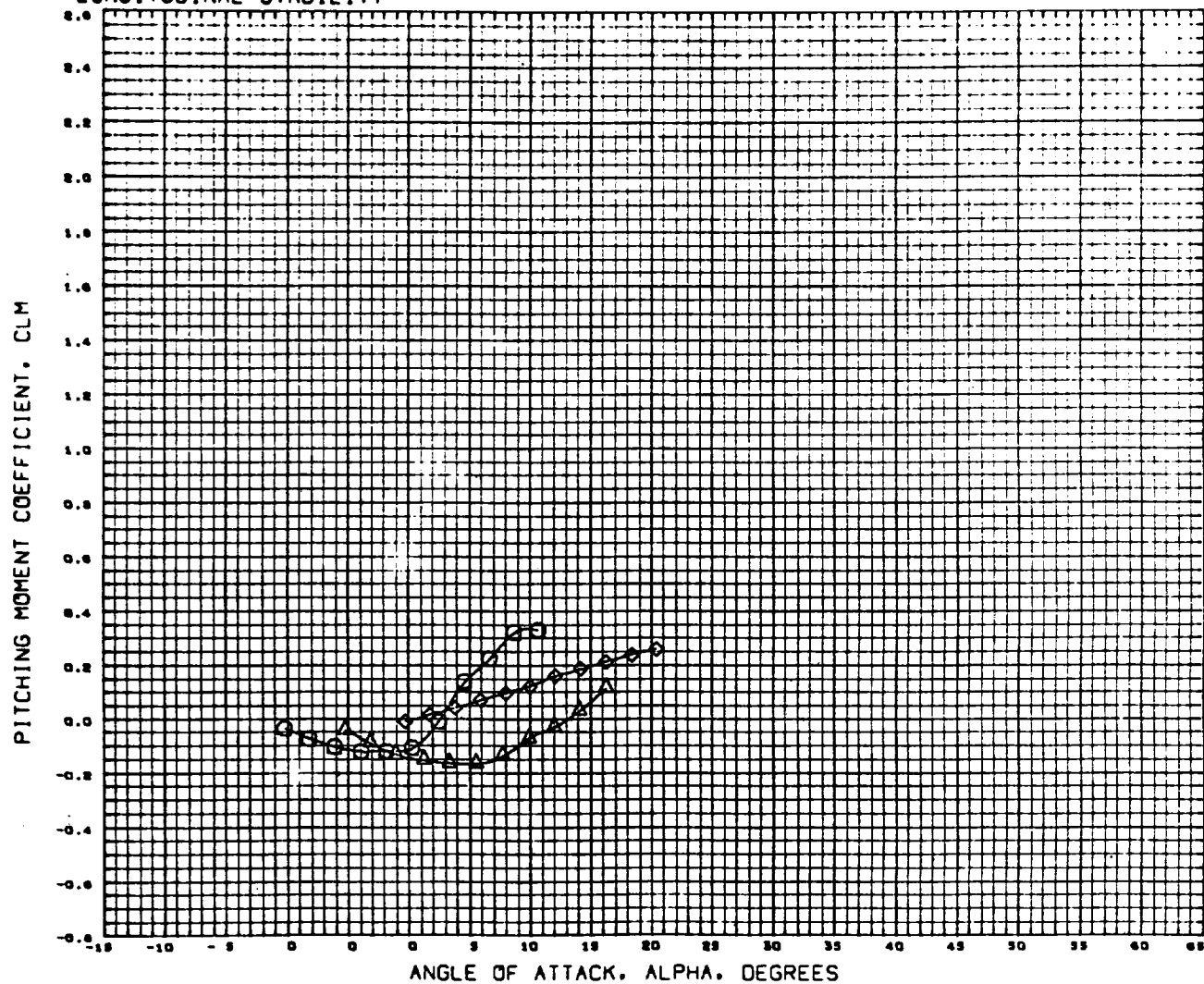
LONGITUDINAL STABILITY



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○	0.998	0.000	DEL	0.000	0.000	BREF 4.6225 SQ. IN.
△	1.197	0.000	ELEVTR	0.000	0.000	LREF 1.5360 IN.
◇	3.490	0.000	CANARD	0.000	0.000	BREF 4.3000 IN.
						XMRP 2.4000 IN.
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						ZMRP 0.0000 IN.
						SCALE 0.0025

DATA HIST. CODE *E

LONGITUDINAL STABILITY

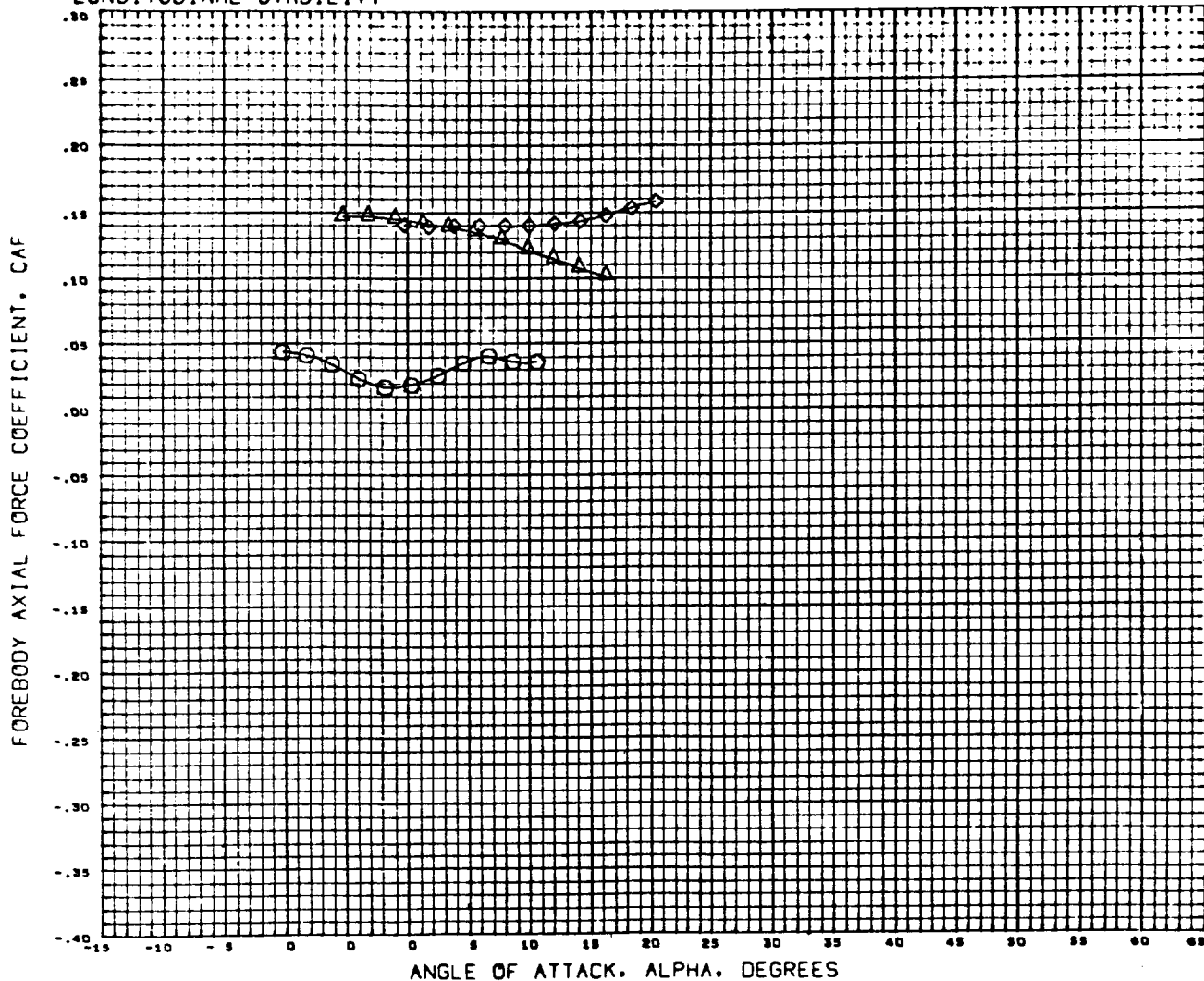


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.998	BETA	0.000	DEL	0.000	SREF	4.6225	93. IN.
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	3.480	ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

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LONGITUDINAL STABILITY

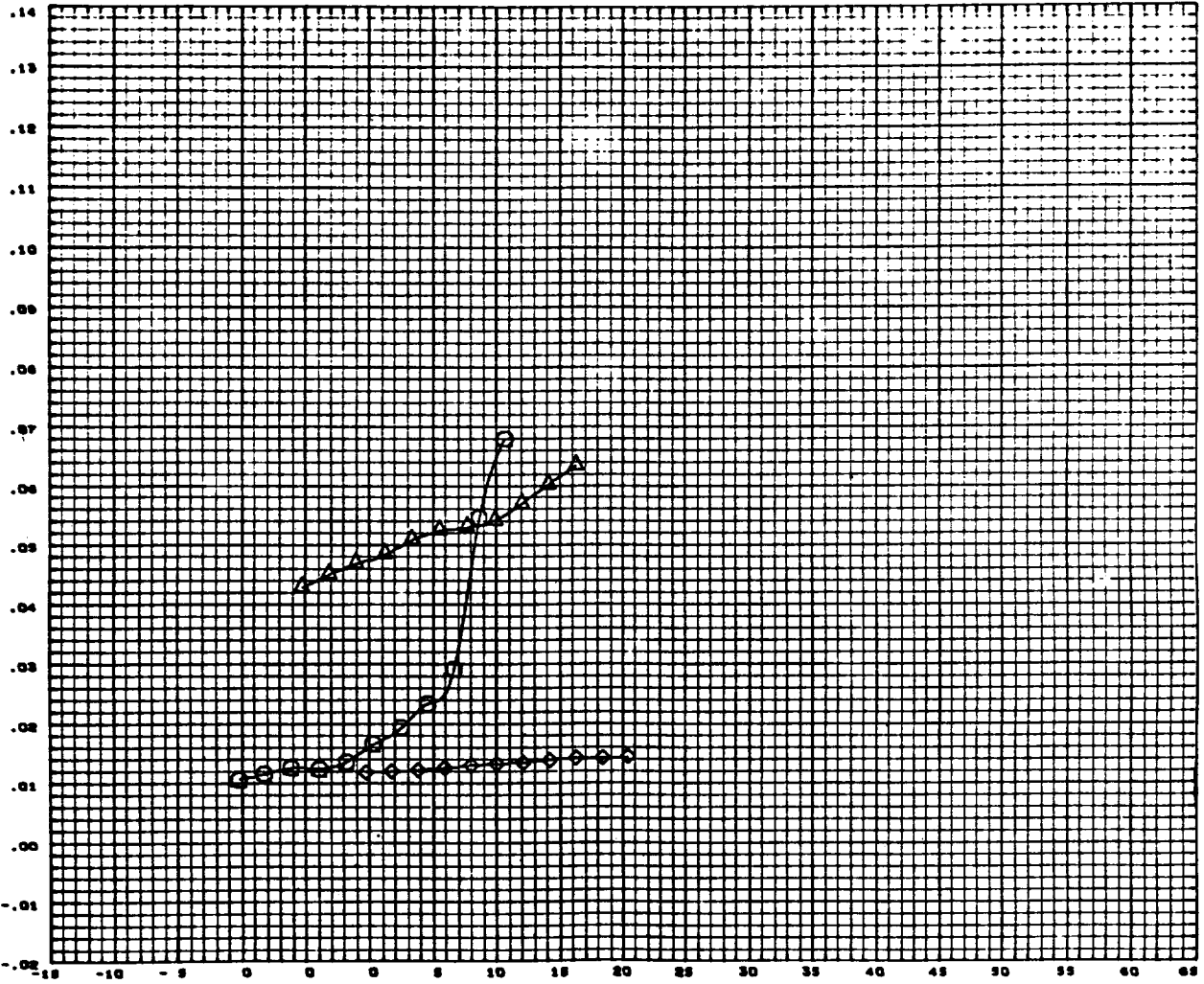


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	IN.
△	0.598	0.000	0.000	0.000	0.000	4.6225	80. IN.
◇	1.197	0.000	0.000	0.000	0.000	1.9360	IN.
○	3.480	0.000	0.000	0.000	0.000	4.3000	IN.
		AILRON				XMRP	2.4000 IN.
						YMRP	0.0000 IN.
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DATA HIST. CODE *E

LONGITUDINAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB



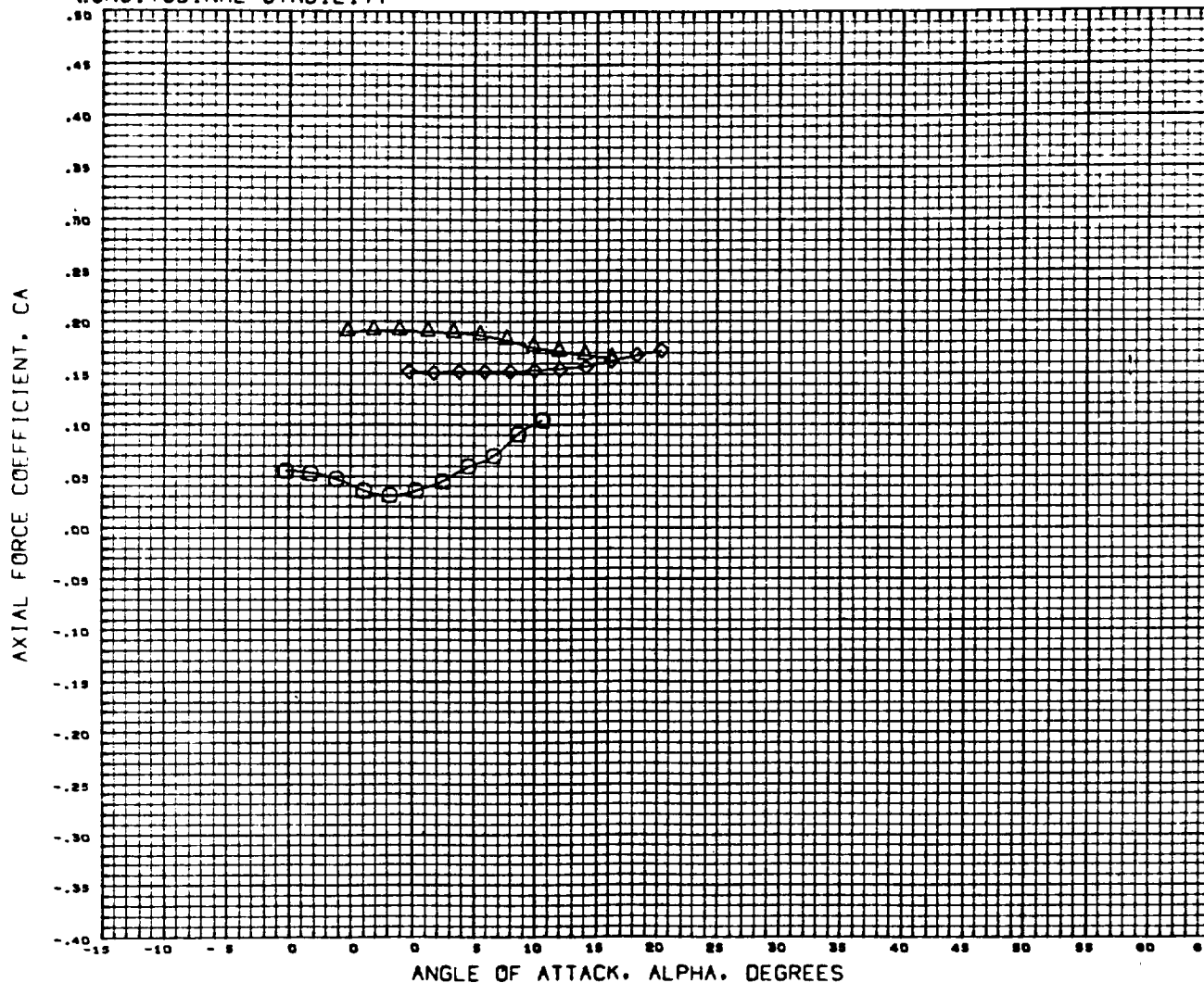
ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.500	BETA	0.000	DEL	0.000	SREF	4.6225 80. IN.
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.5360 IN.
◇	3.460	AILRON	0.000	CANARD	0.000	BREF	4.3000 IN.
						XHRP	2.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
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DATA HIST. CODE *E

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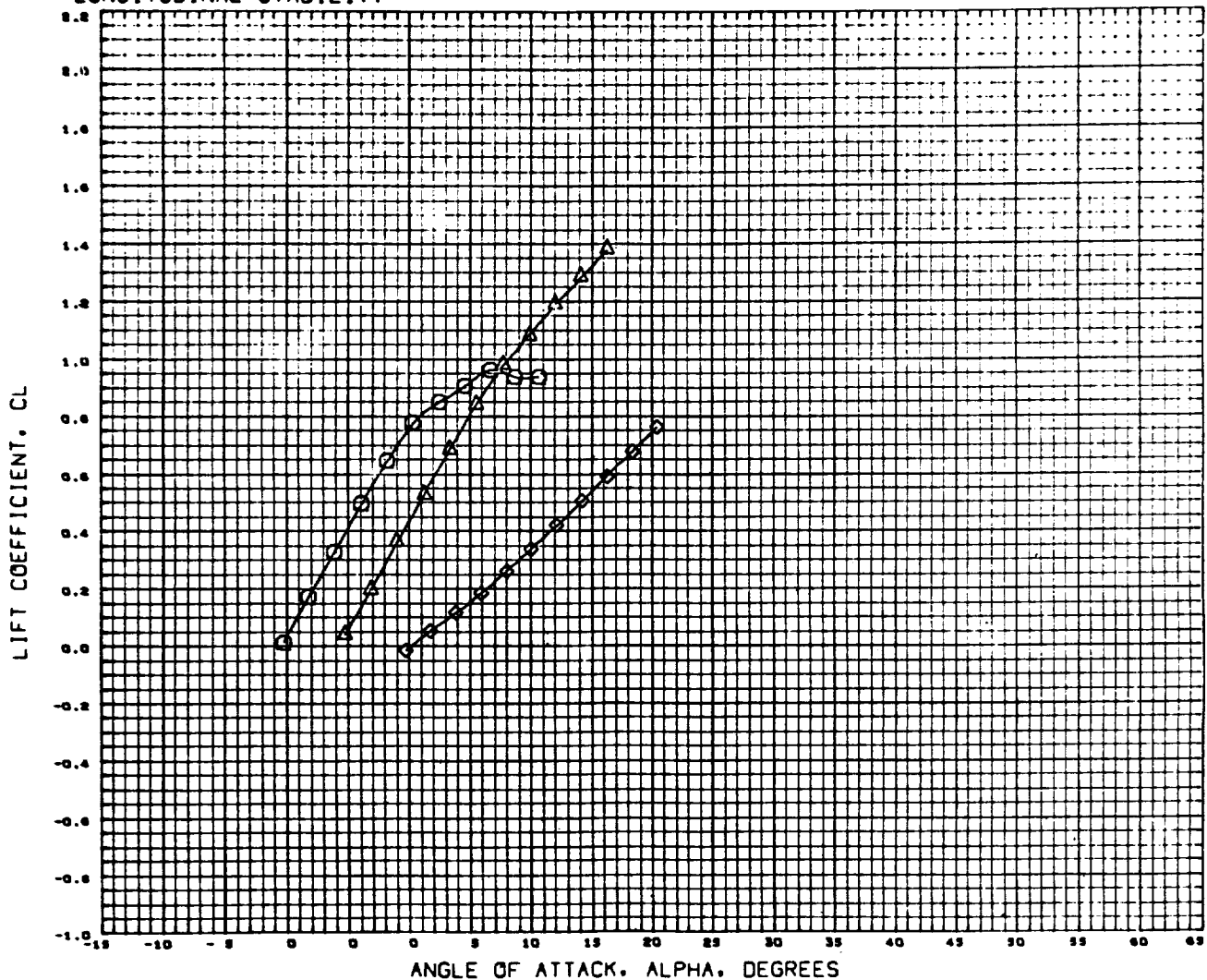
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.598	BETA	0.000	DEL	0.000	SREF	4.6225
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.3360
◇	3.480	ATLRON	0.000	CANARD	0.000	BREF	4.3000
						YNRP	2.4000
						YNRP	0.0000
						YNRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.598	BETA	0.000	DEL	0.000	SREF	4.6223	50. IN.
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
◇	3.400	ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
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						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
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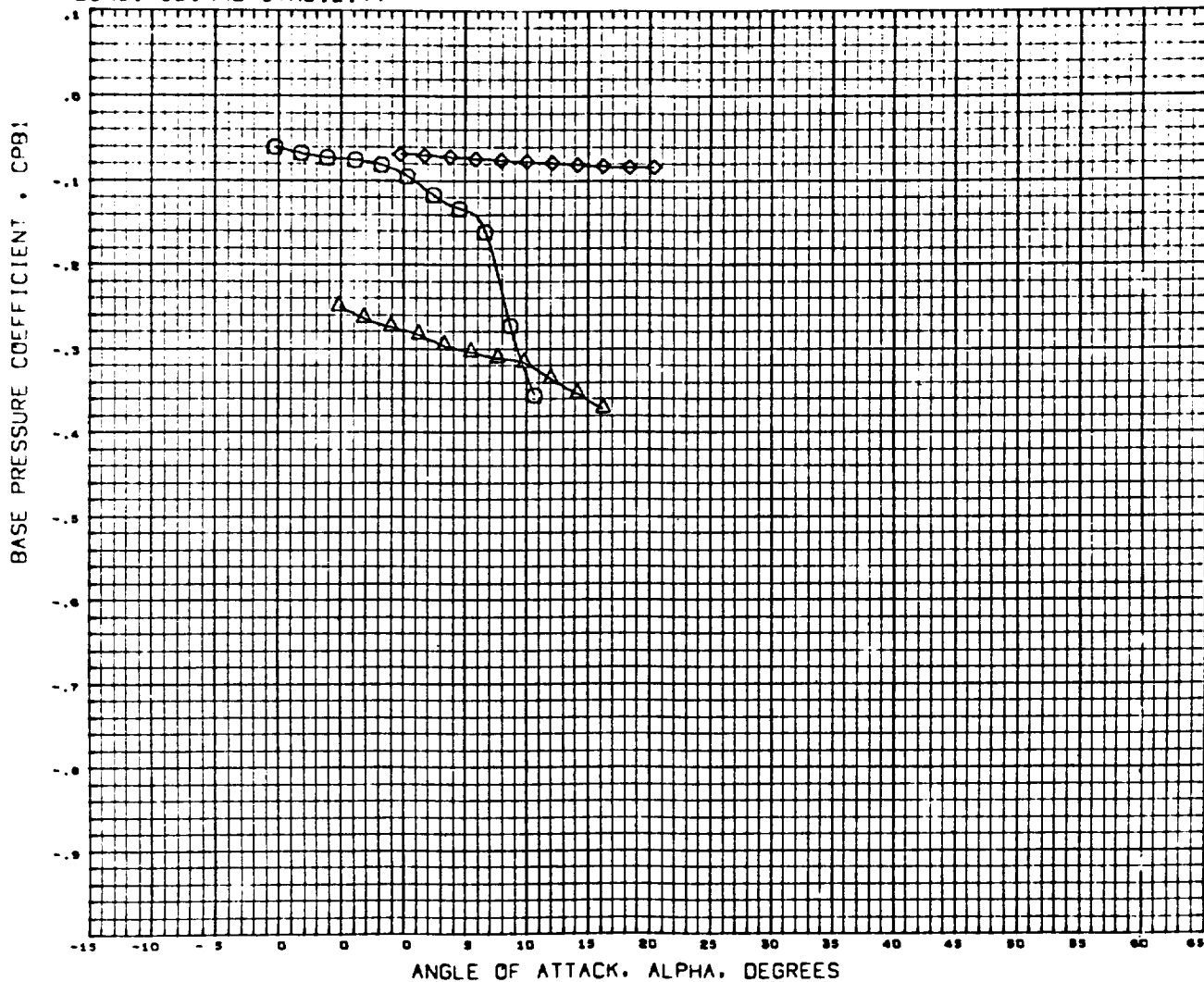
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W

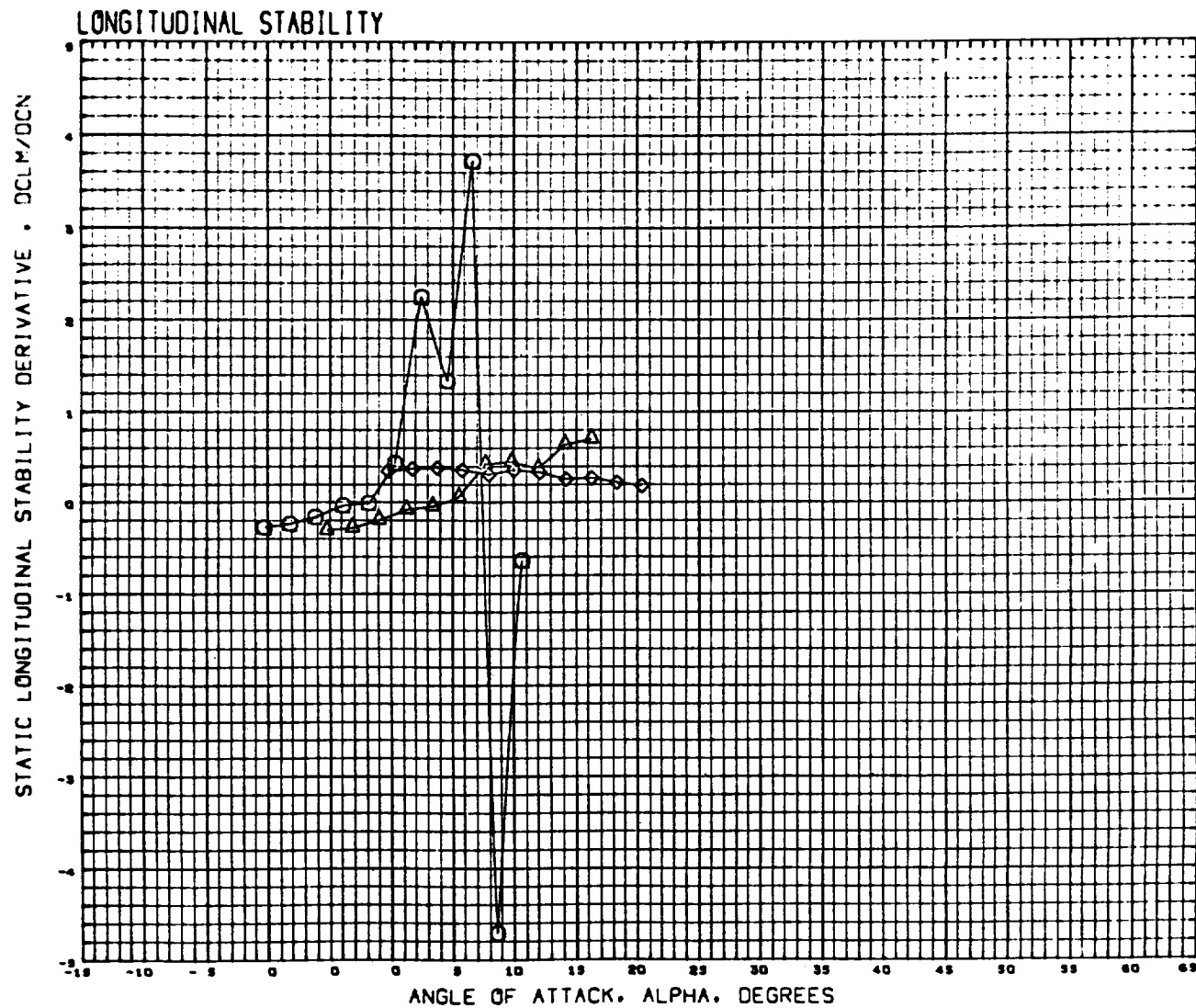
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LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.598	BETA	0.000	DEL	0.000	SREF	4.6225 SQ. IN.
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.5360 IN.
◇	3.485	AILRON	0.000	CANARD	0.000	BREF	4.3000 IN.
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						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

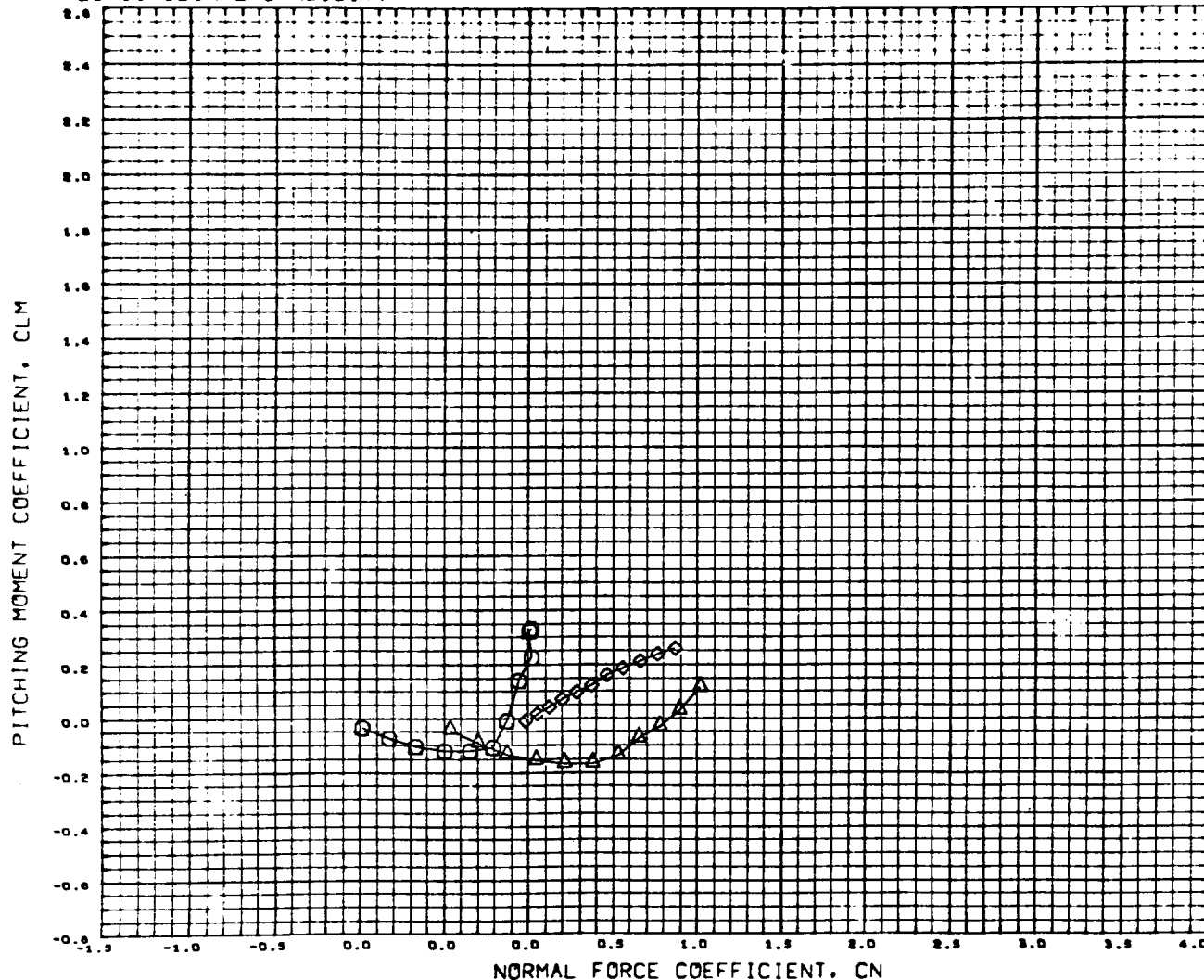


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◇	1.490	ATLRON	0.000	CANARD	0.000	BREF	4.3000	1N.
						XMRP	2.4000	1N.
						YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
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DATA HIST. CODE *E

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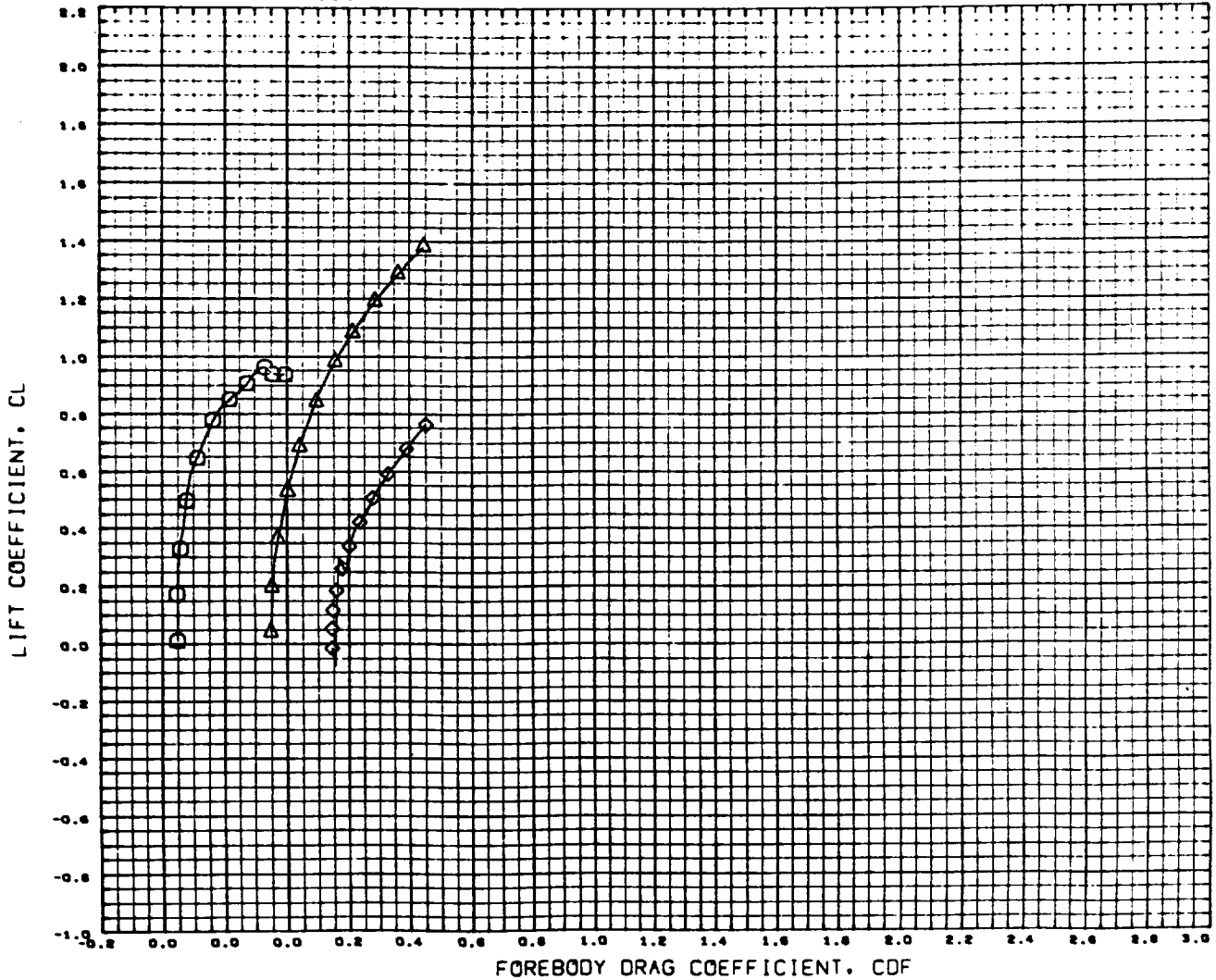
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.598	BETA	0.000	DEL	0.000	SREF	4.6225	50. IN.
△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	3.480	ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

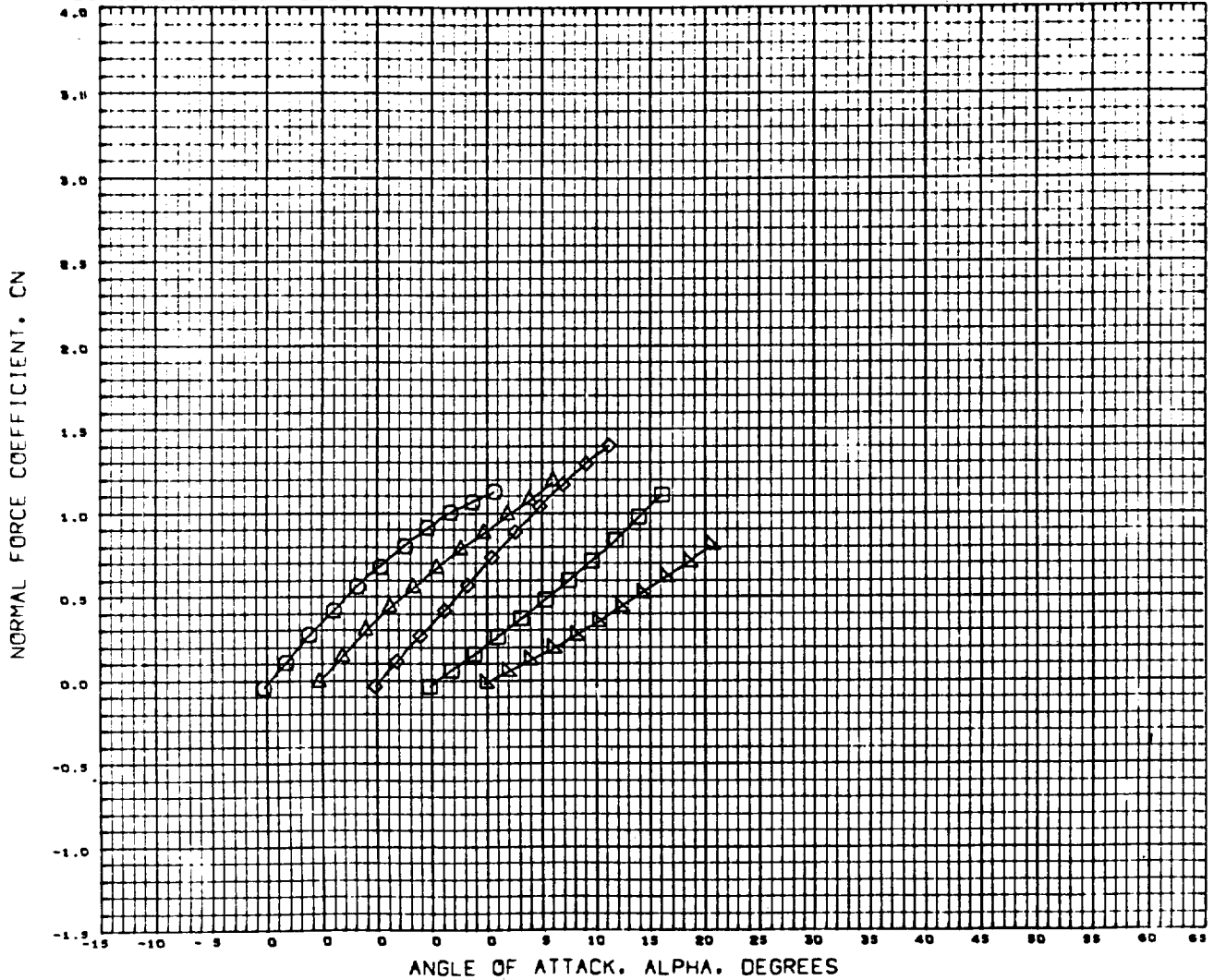
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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△	1.197	DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
◇	3.480	AILROM	0.000	CANARD	0.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
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DATA HIST. CODE *E

LONGITUDINAL STABILITY

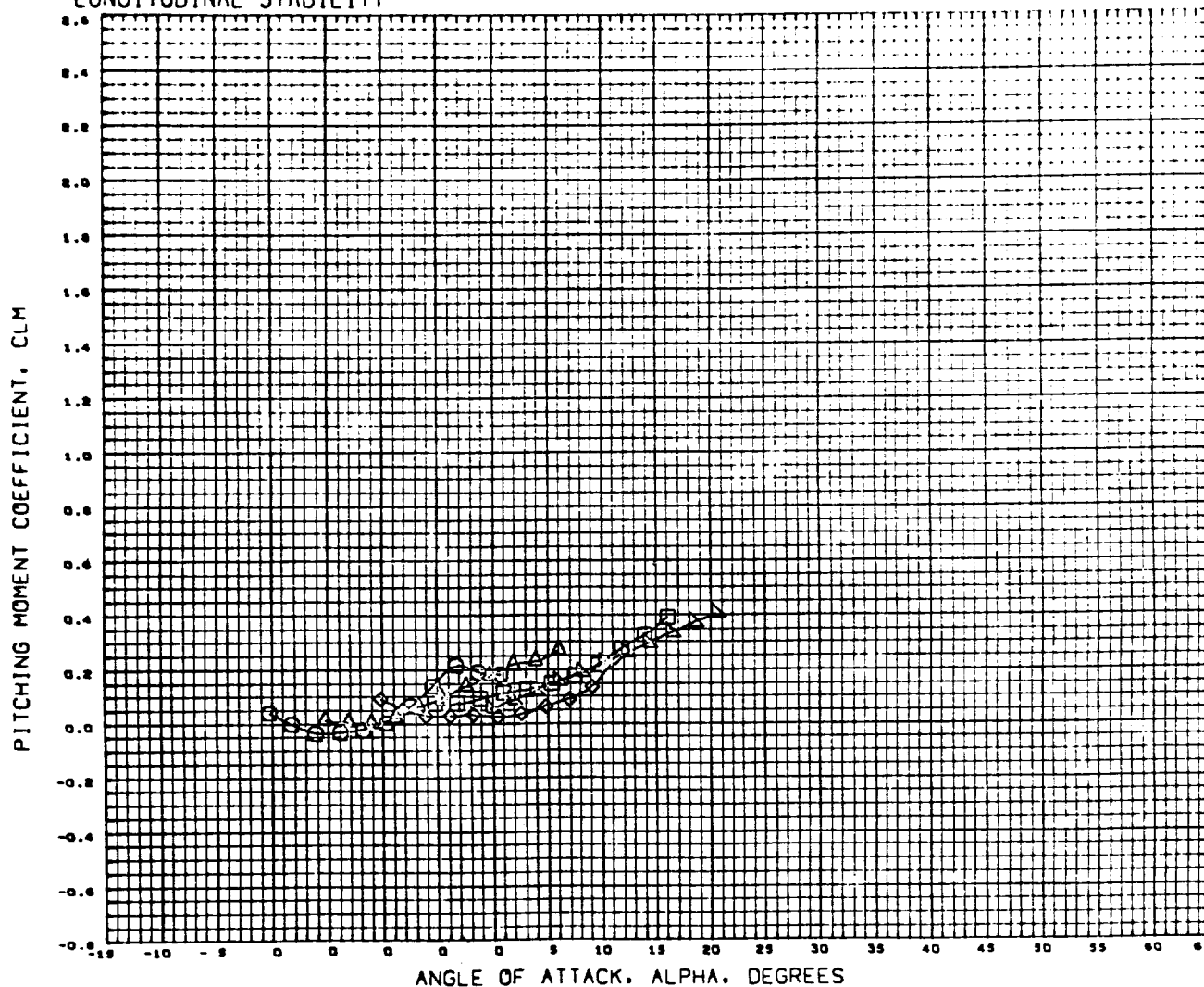


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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	0.901	DER	0.000	ELEVTR	0.000	LRFP	1.5360	IN.
	1.193	ATLRON	0.000	CANARD	0.000	SRFP	4.3000	IN.
	1.962					KMRP	2.4000	IN.
	3.490					YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

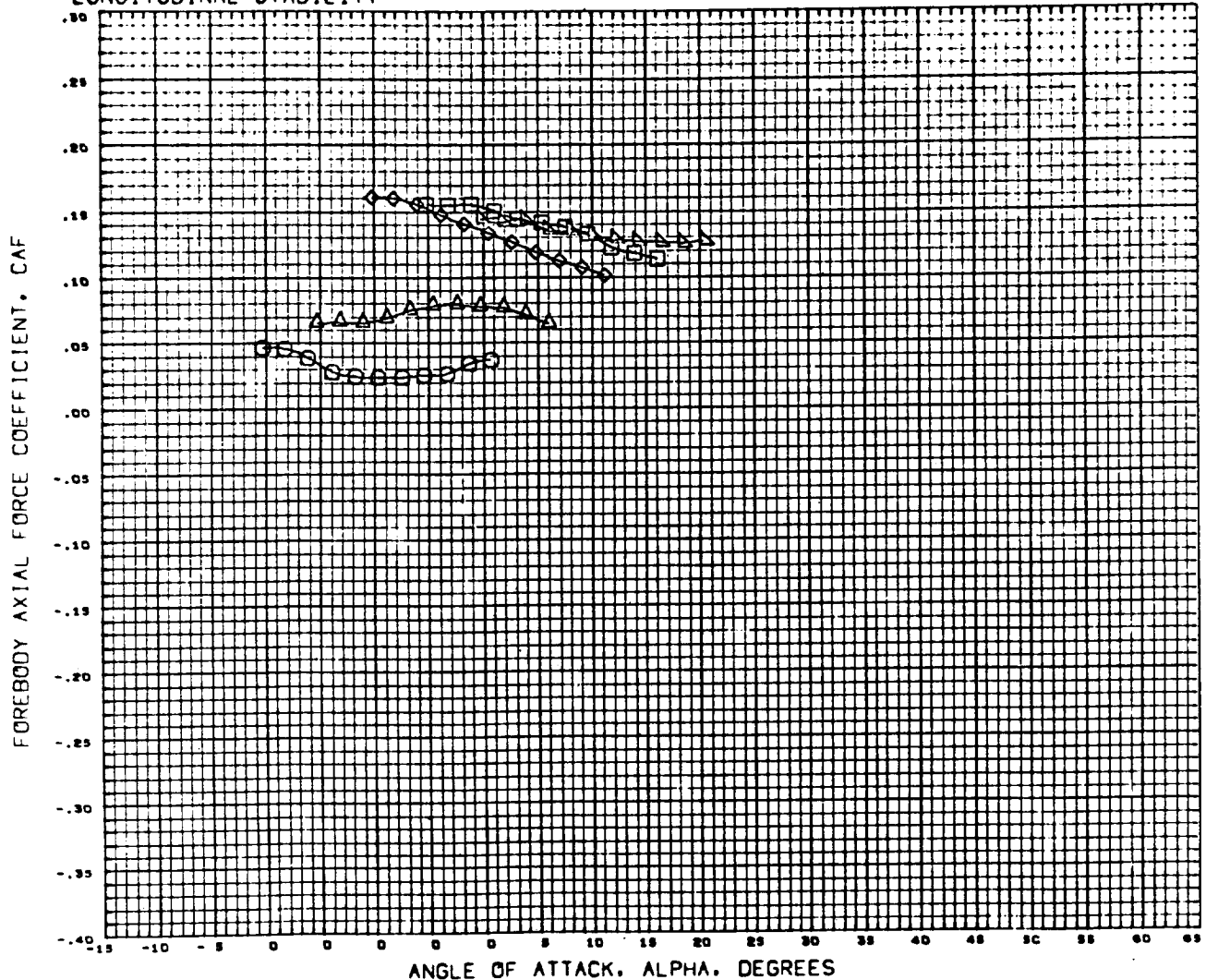
M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E3837A) 06 SEP 72 PAGE 71

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	IN.
Mach	0.600	0.000	0.000	0.000	0.000	4.6225	53.14.
	0.901	0.000	0.000	0.000	0.000	1.5360	IN.
	1.193	0.000	0.000	0.000	0.000	4.3000	IN.
	1.962	0.000	0.000	0.000	0.000	2.4000	IN.
	3.450	0.000	0.000	0.000	0.000	0.0000	IN.
DATA HIST. CODE *E						ZMRP	0.0000 IN.
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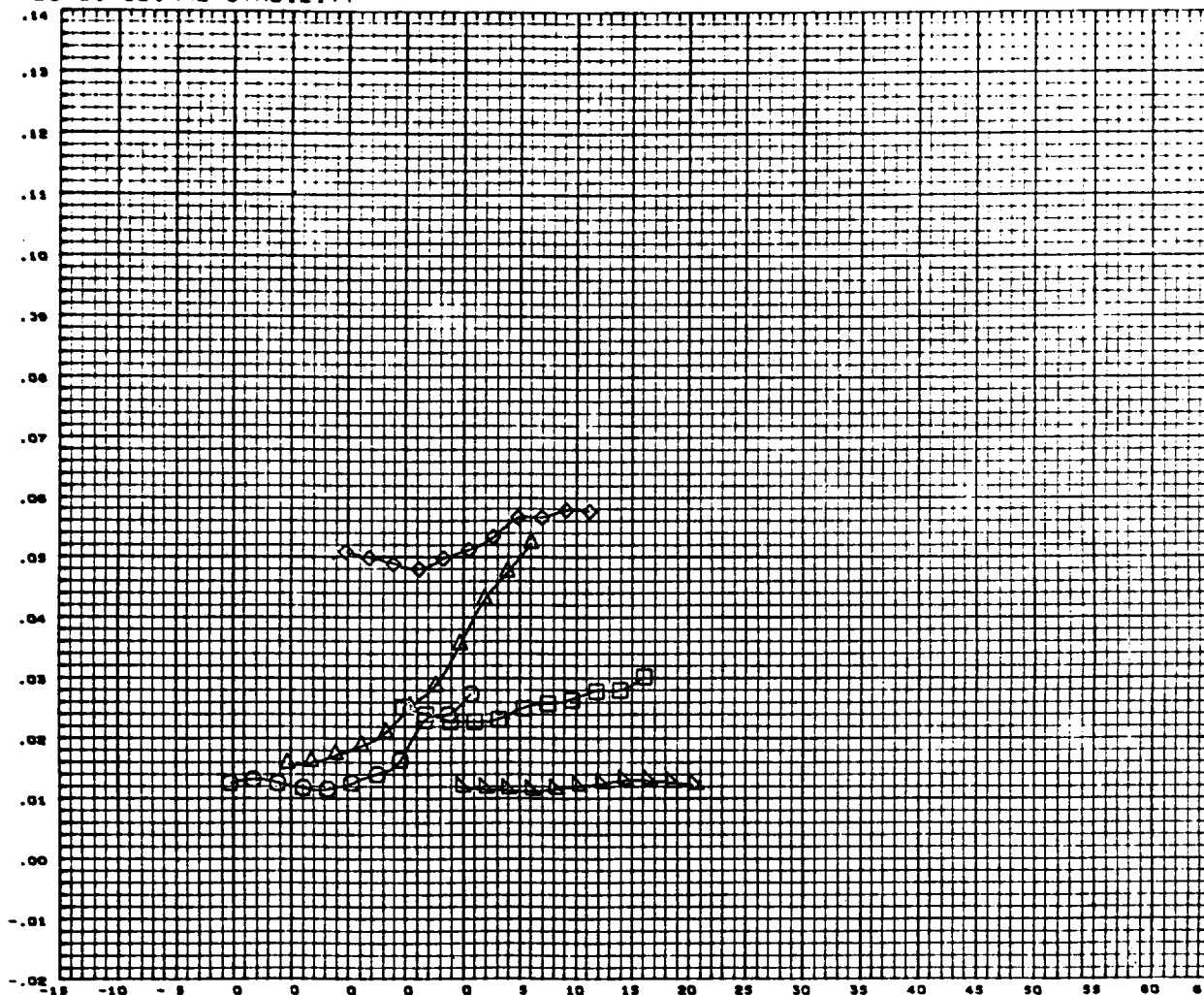
LONGITUDINAL STABILITY



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION	
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	0.000	0.000	0.000	0.000	0.000	LREF	IN.
	0.901	0.000	0.000	0.000	0.000	BREF	IN.
	1.193	0.000	0.000	0.000	0.000	WNP	IN.
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DATA HIST. CODE 4E						SCALE	0.0025

LONGITUDINAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB

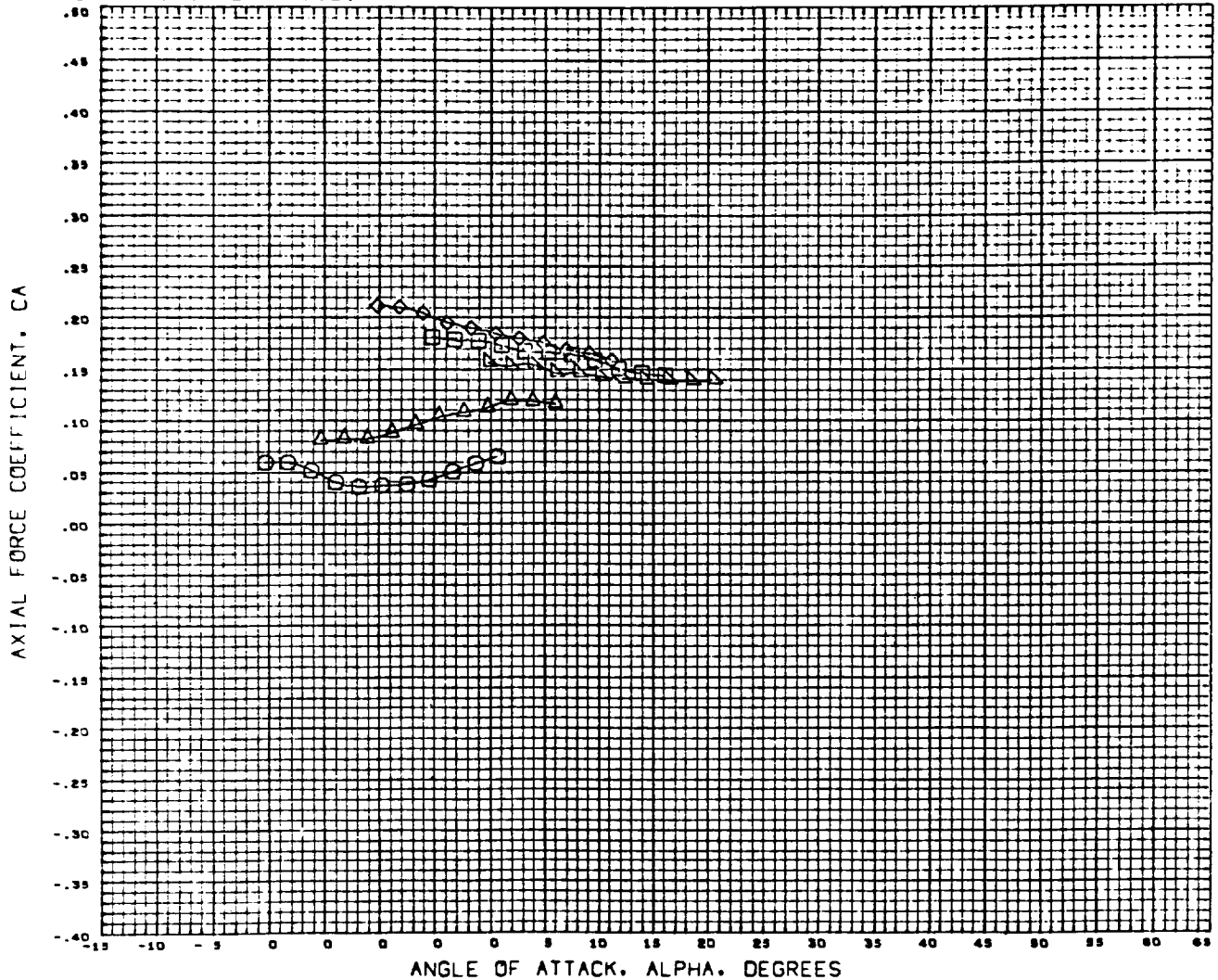


ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.600	BETA	0.000	DEL	0.000	SREF	4.6225	SQ. IN.
△	0.901	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	1.193	AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
▽	1.982					XMRP	2.4000	IN.
□	3.480					YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

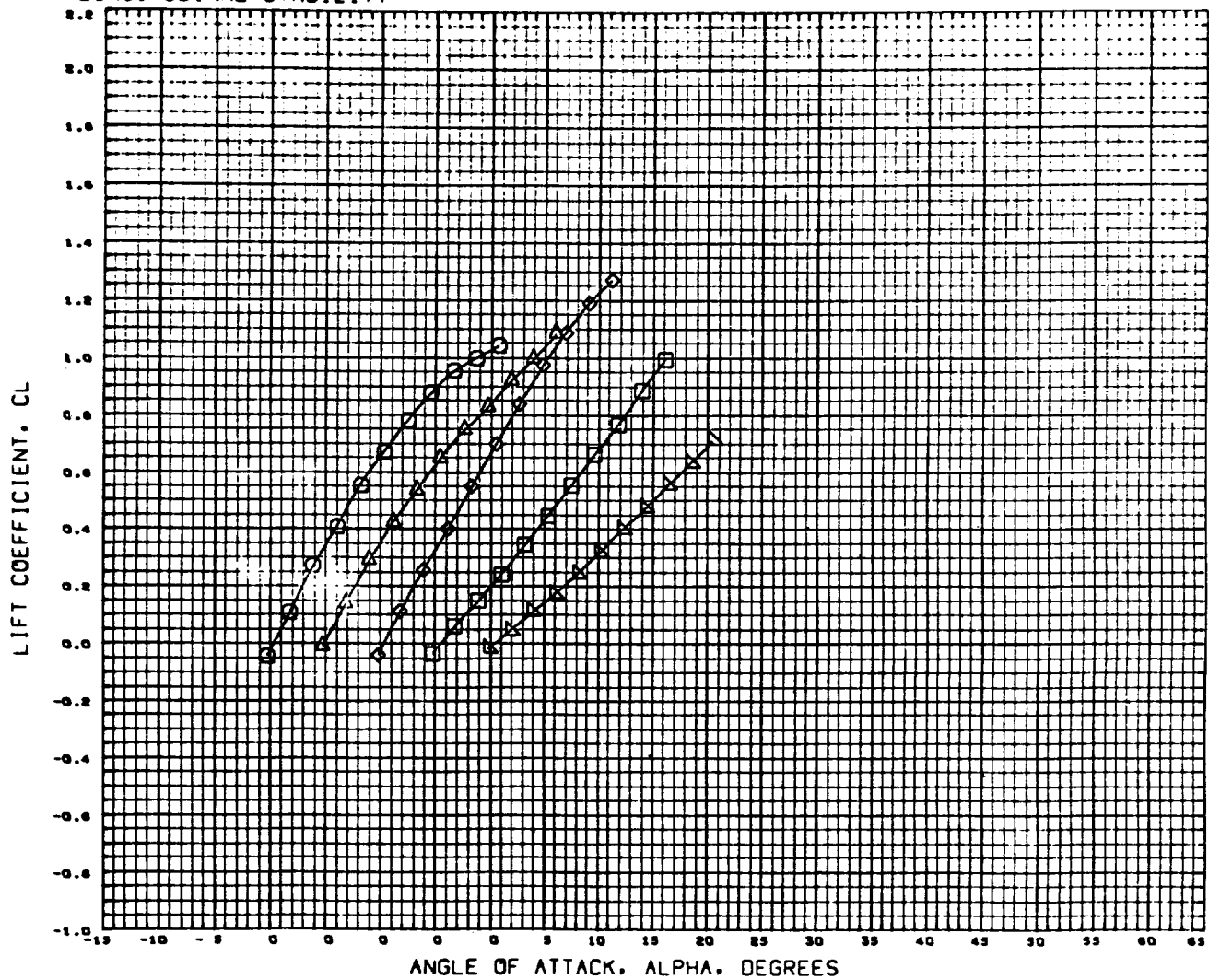
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LONGITUDINAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.600	BETA	0.000	DEL	0.000		SREF	4.6225	90. IN.
△	0.901	DER	0.000	ELEVTR	0.000		LREF	1.9360	IN.
◻	1.193	AILRON	0.000	CANARD	0.000		BREF	4.3000	IN.
◻	1.962						ZMRP	2.4000	IN.
◻	3.490						YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

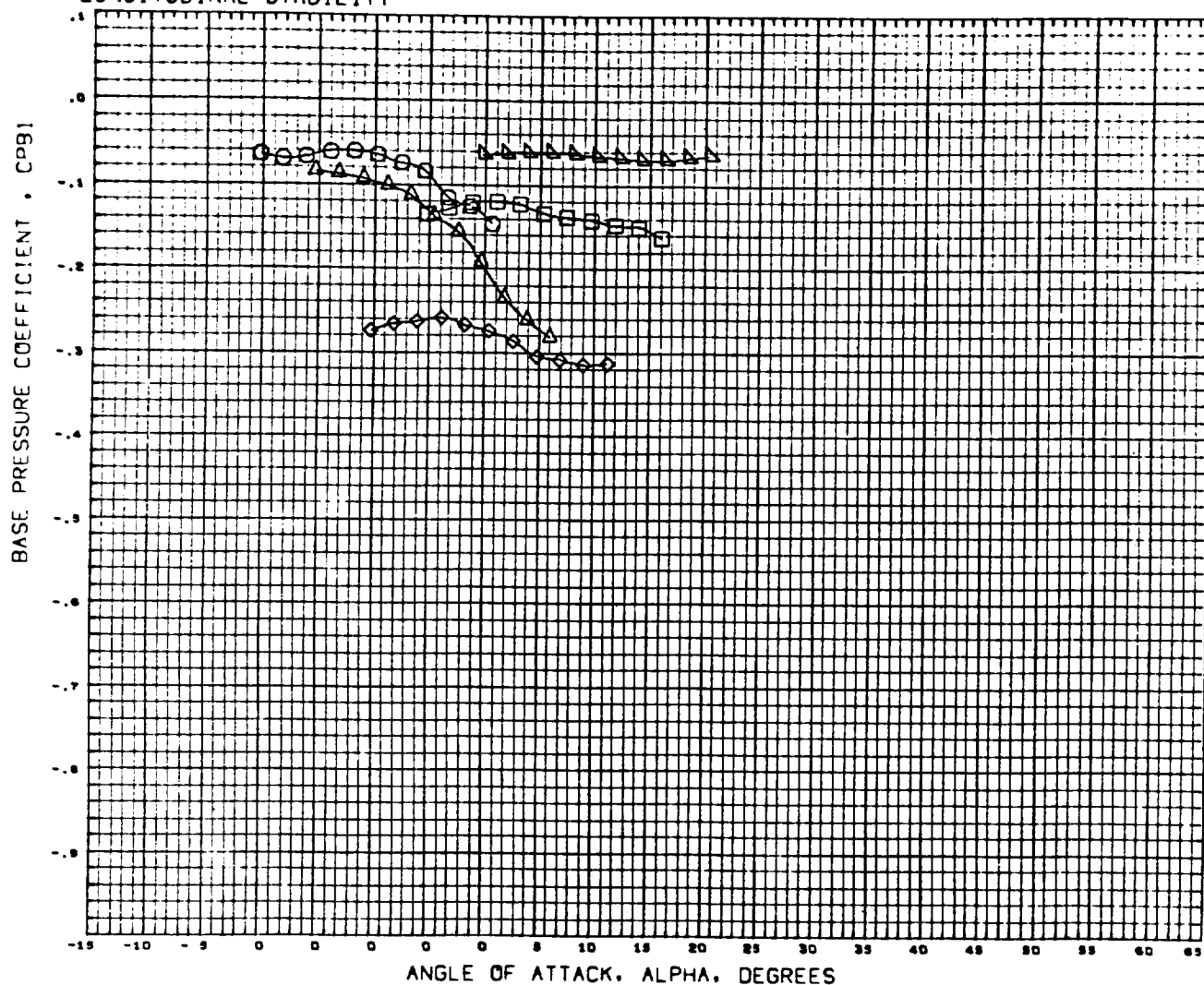
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
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◇	0.901	DER	0.000	ELEVTR	0.000	LREF	1.5360
◊	1.193	AILRON	0.000	CANARD	0.000	BREF	4.3000
△	1.962					XNRP	2.4000
▽	3.480					YNRP	0.0000
						ZNRP	0.0000
						SCALE	0.0025

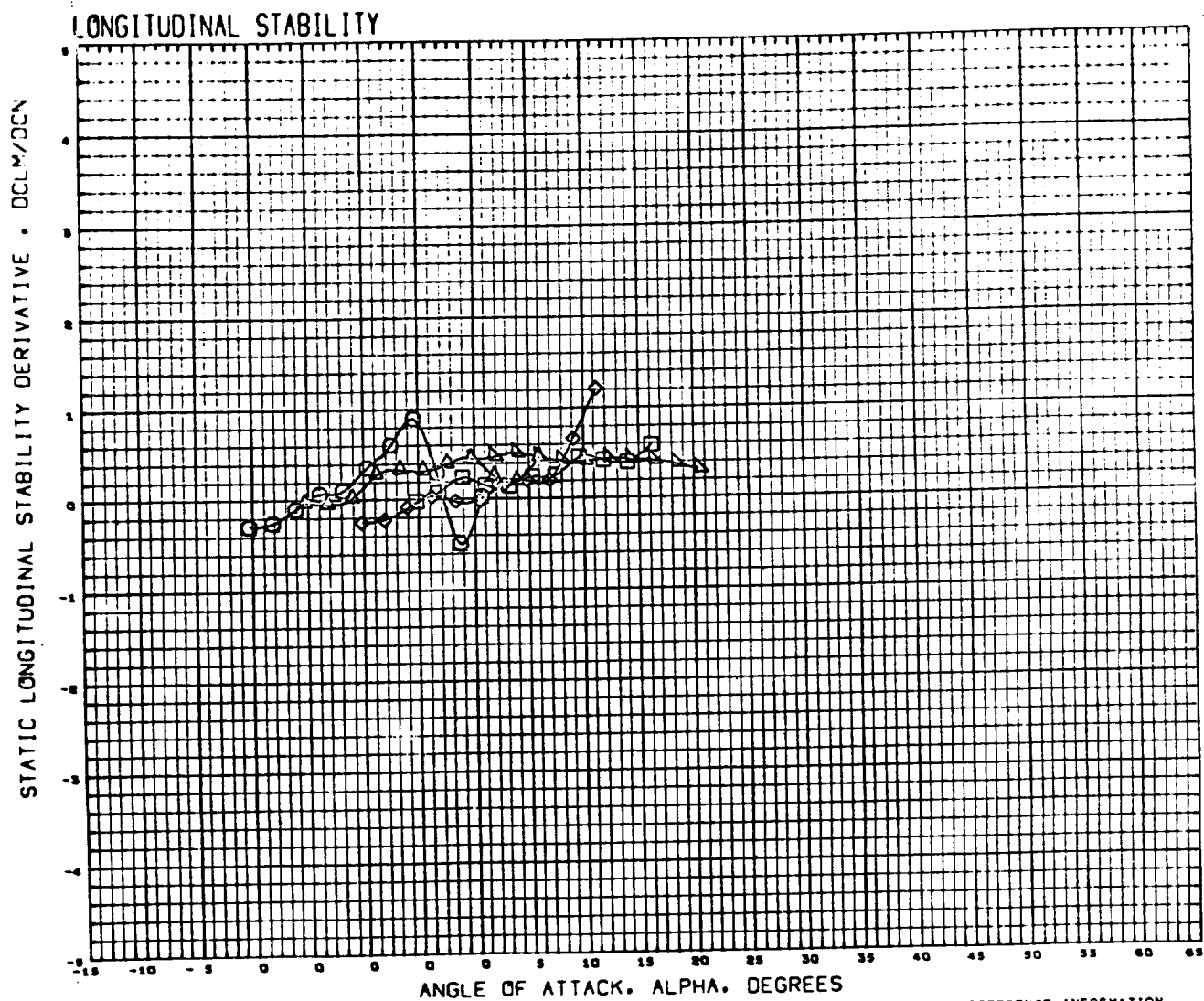
DATA HIST. CODE 4E

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	IN.
○	0.600	0.000	0.000	0.000	0.000	4.6225	1.5360	50. IN.
△	0.901	0.000	0.000	0.000	0.000	4.3000	2.4000	IN.
□	1.193	0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
◇	1.962	0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
◇	3.450	0.000	0.000	0.000	0.000	0.0025		IN.

DATA HIST. CODE *E



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.800	BETA	0.000	DEL	0.000		SREF	4.6225	50. IN.
○	0.901	DER	0.000	ELEVTR	0.000		LREF	1.3360	IN.
△	1.193	AILRON	0.000	CANARD	0.000		BREF	4.3000	IN.
□	1.962						ZMRP	2.4000	IN.
◇	3.480						YMRP	0.0000	IN.
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							SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

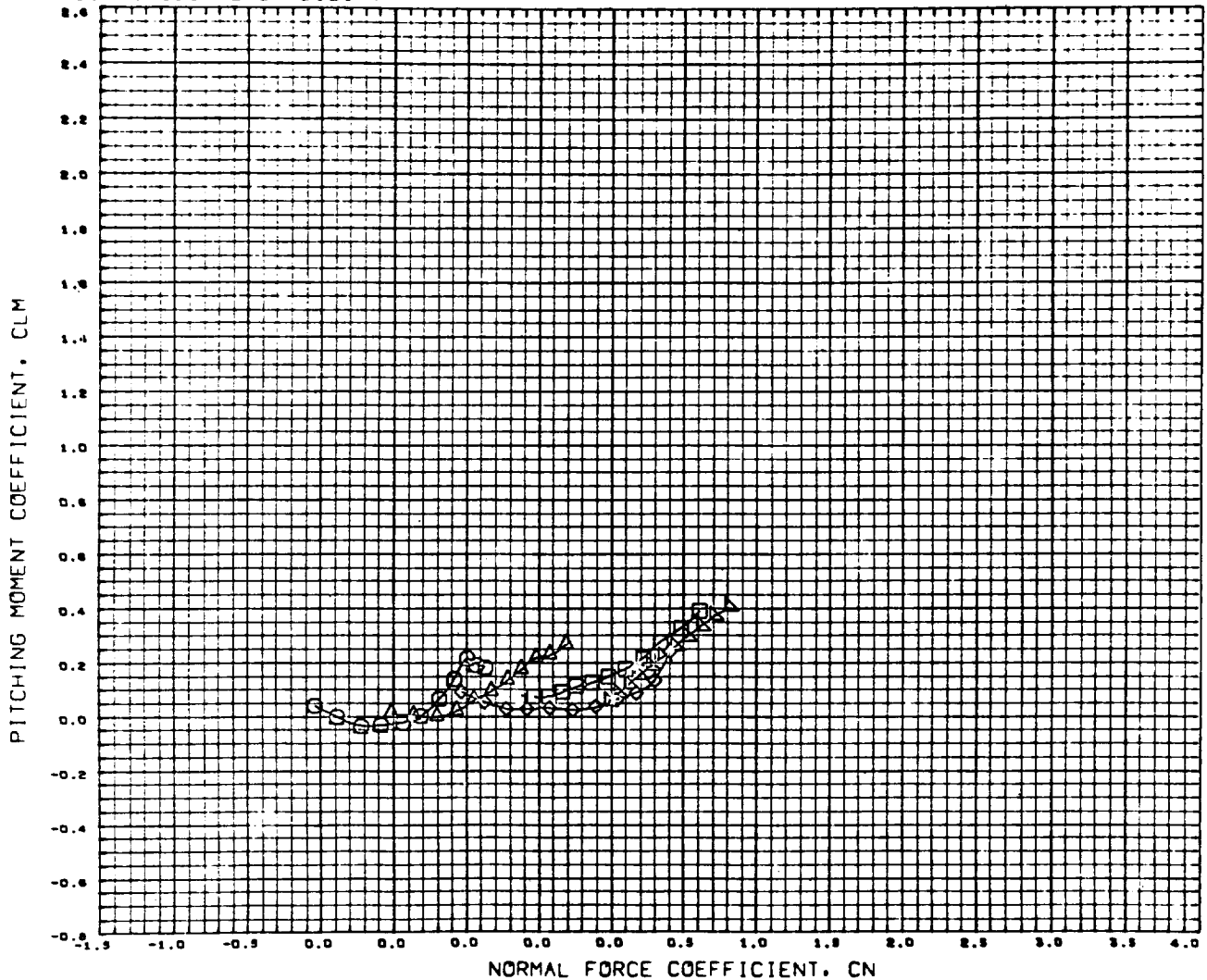
MODEL

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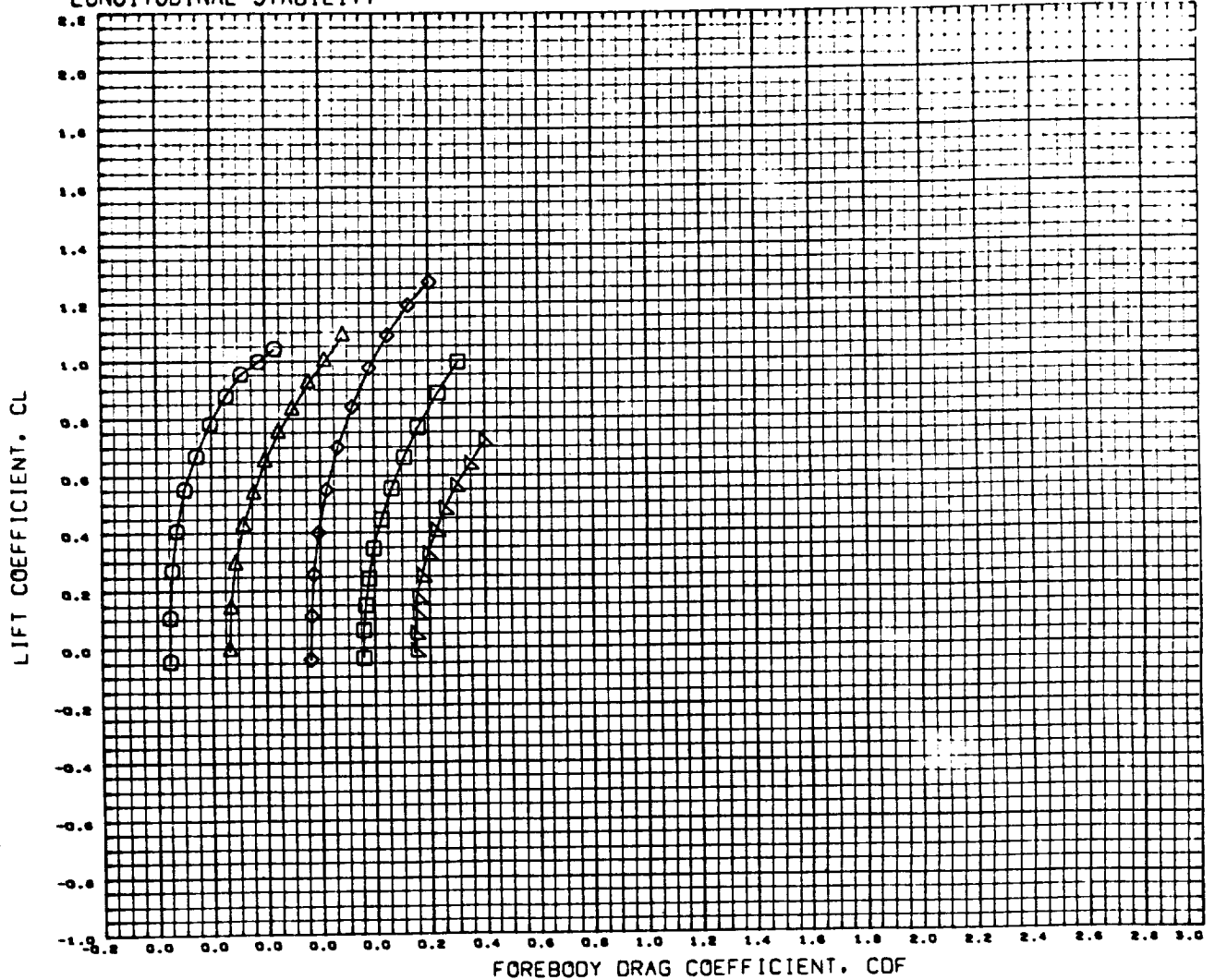
LONGITUDINAL STABILITY



SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	MACH	BETA	DEL	0.000	SREF	4.6225	50. IN.
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◇◇◇◇	0.901	ALLRON	0.000	CANARD	BREF	4.3000	IN.
◇◇◇◇	1.193				XMRP	2.4000	IN.
◇◇◇◇	1.962				YMRP	0.0000	IN.
◇◇◇◇	3.450				ZMRP	0.0000	IN.
					SCALE	0.0025	

DATA HIST. CODE *E

LONGITUDINAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.600	BETA	0.000	DEL	0.000		SREF	4.6225	30. IN.
◇	0.901	DER	0.000	ELEVTR	0.000		LRFP	1.5360	IN.
△	1.193	AILRON	0.000	CANARD	0.000		GRFP	4.3000	IN.
□	1.962						XMRP	2.4000	IN.
▽	3.460						YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

Y496-MSFC

AR11981-3

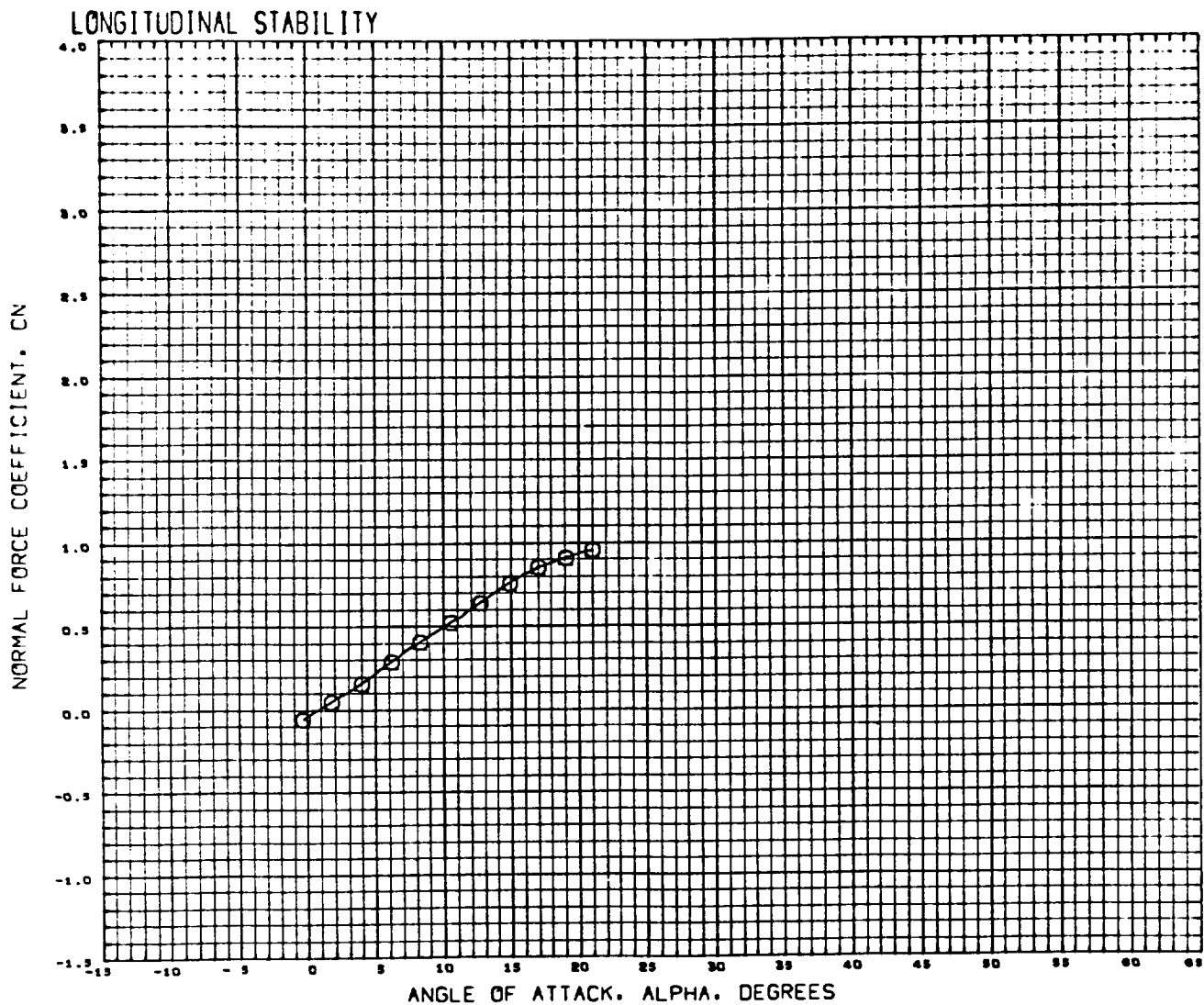
MODEL

W6HB2C12V2

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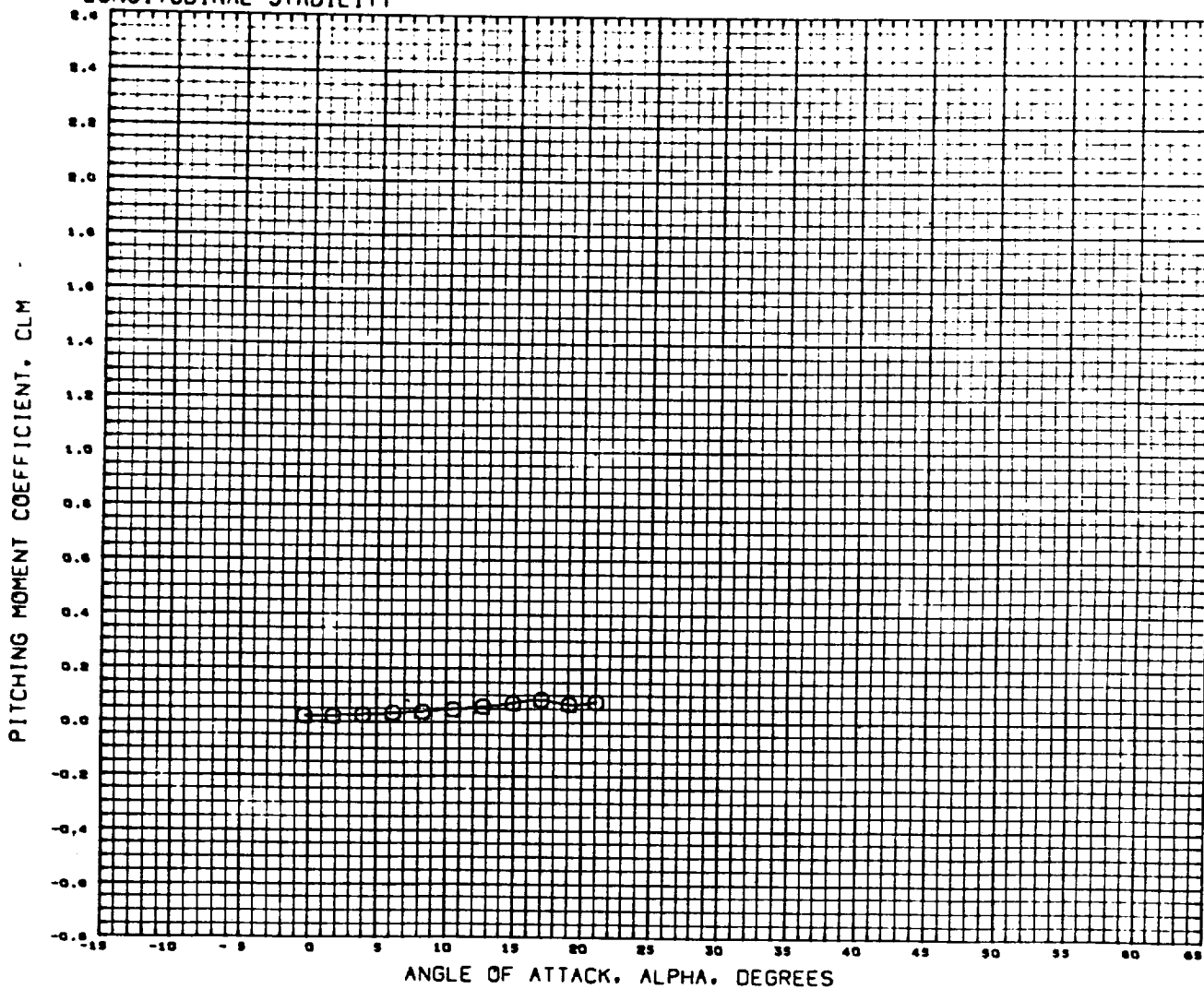


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
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		DER				2.4000	0.0000	0.0000
		AILRON				0.0000	0.0000	0.0025

DATA HIST. CODE M*E

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LONGITUDINAL STABILITY

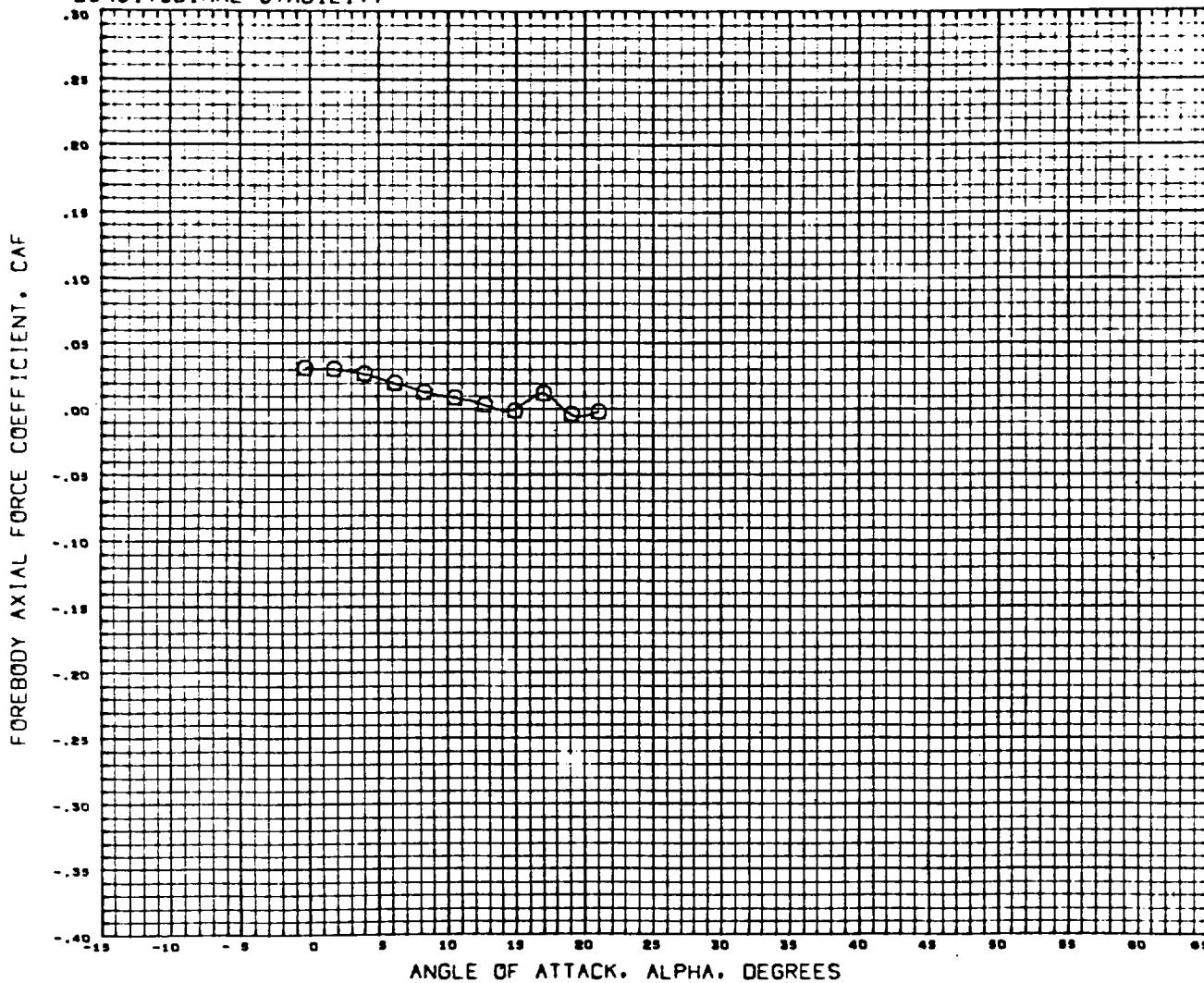


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.399	BETA	0.000	DEL	0.000	SREF	7.7055	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920	IN.
						YMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
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DATA HIST. CODE H&E

M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3824A) 06 SEP 72 PAGE 82

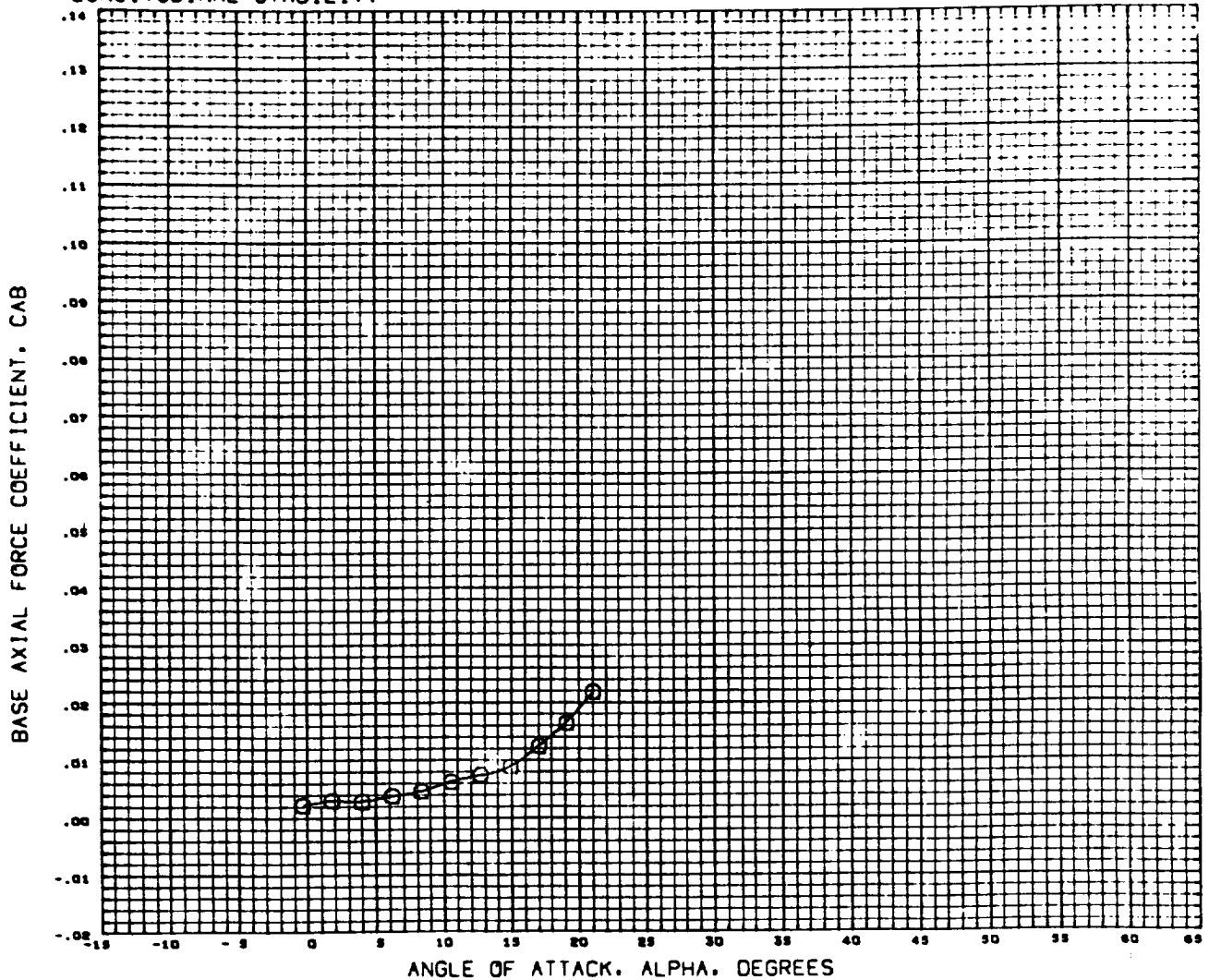
LONGITUDINAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES			REFERENCE INFORMATION			
O	0.999	BETA	0.000	DEL	0.000		BREF	7.7005	SQ. IN.	
		DER	0.000	ELEVTR	0.000		LREF	3.1700	IN.	
		AILRON	0.000	CANARD	0.000		QREF	4.3920	IN.	
							XHRP	2.4000	IN.	
								YHRP	0.0000	IN.
								ZHRP	0.0000	IN.
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		DATA HIST. CODE		MPE						

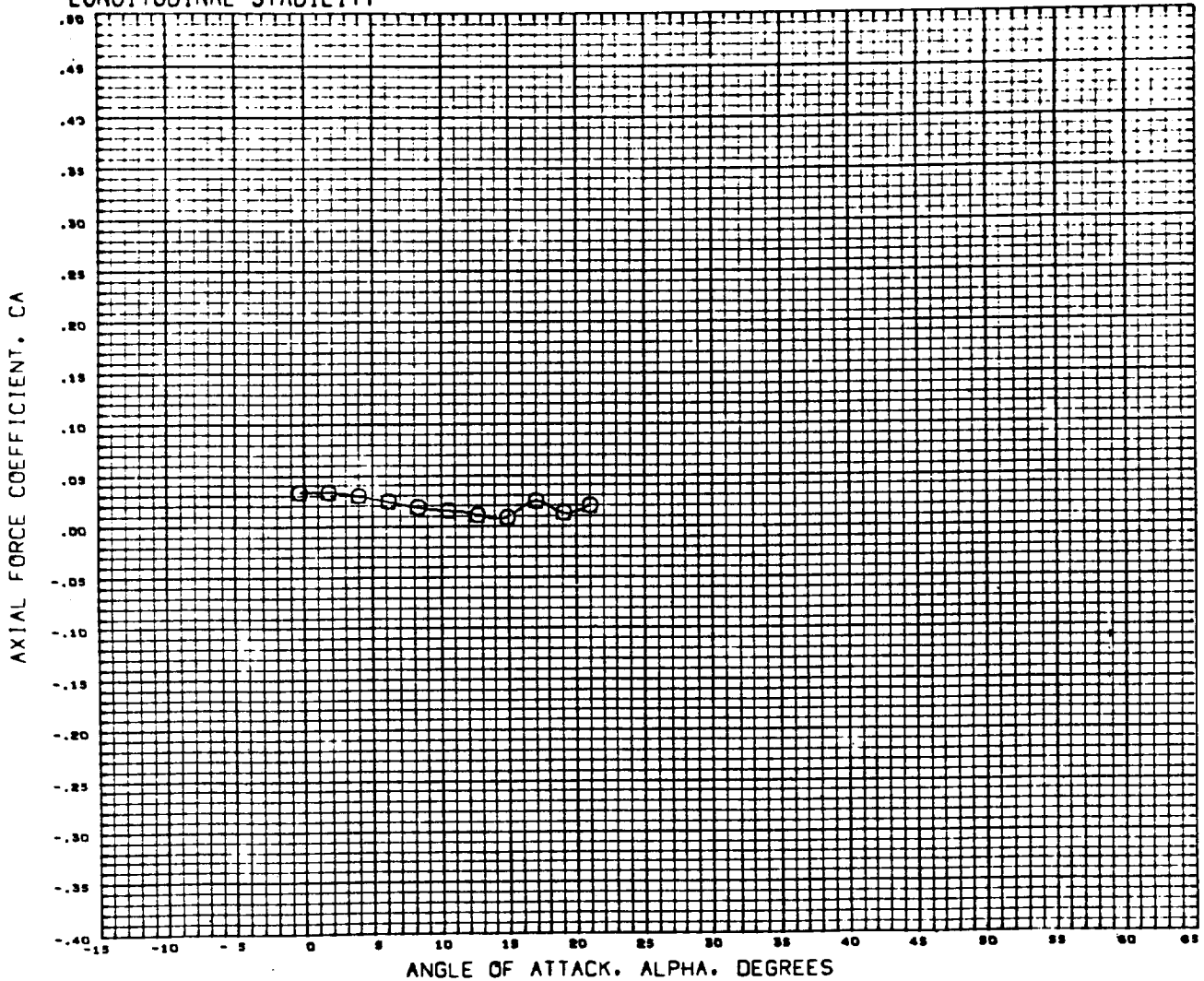
DATA HIST. CODE MPE
M496-MSFC AR11981-3 MODEL W982C12V1 (E3824A) 06 SEP 72 PAGE 83

LONGITUDINAL STABILITY



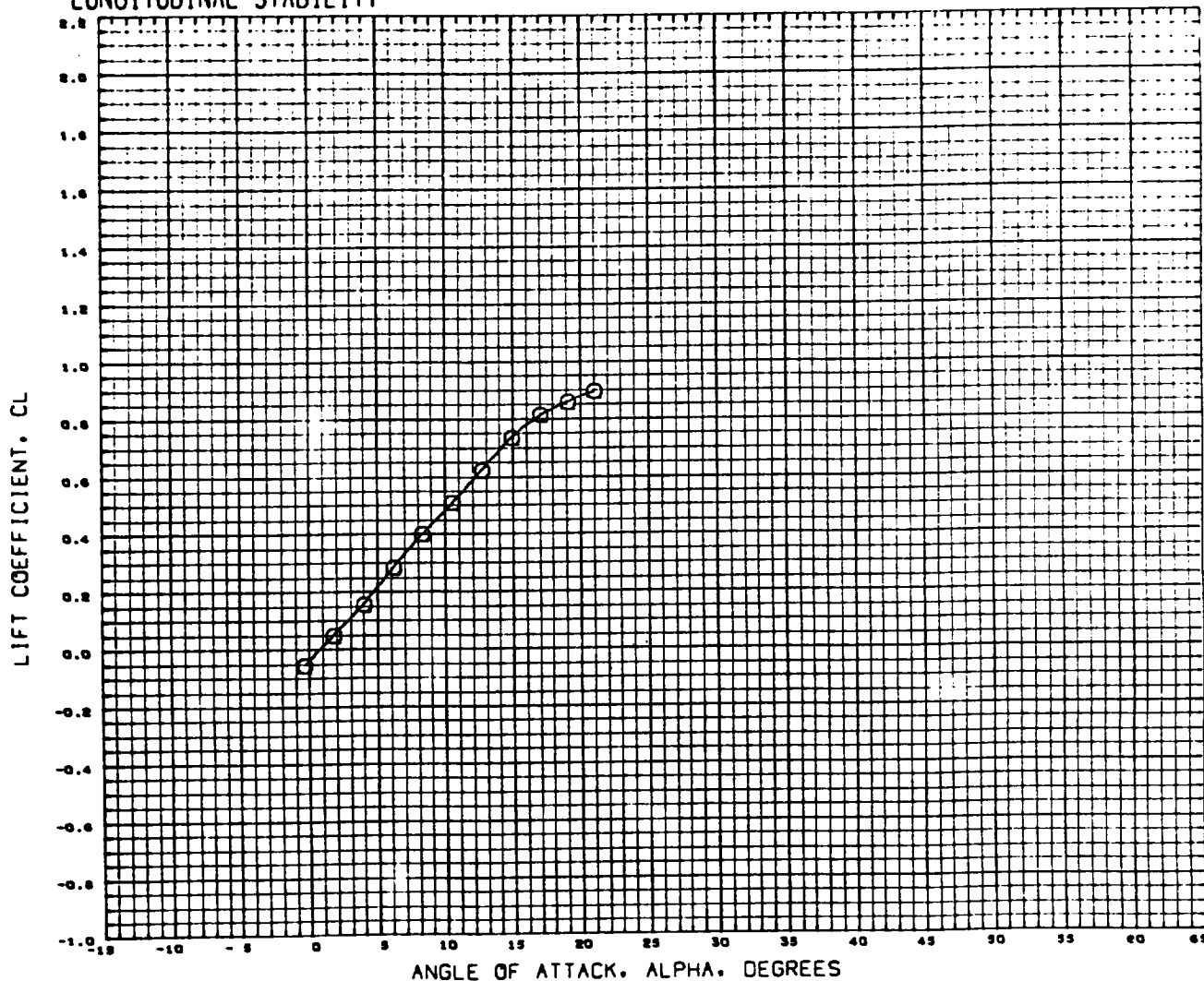
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
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		DER						
		AILRON						
						XMRP	2.4000	0.0000
						YMRP	0.0000	0.0000
						ZMRP	0.0000	0.0000
						SCALE	0.0025	

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.599	BETA	0.000	DEL	0.000	SREF	7.7005 80. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920 IN.
						YMRP	2.4000 IN.
						ZMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

LONGITUDINAL STABILITY

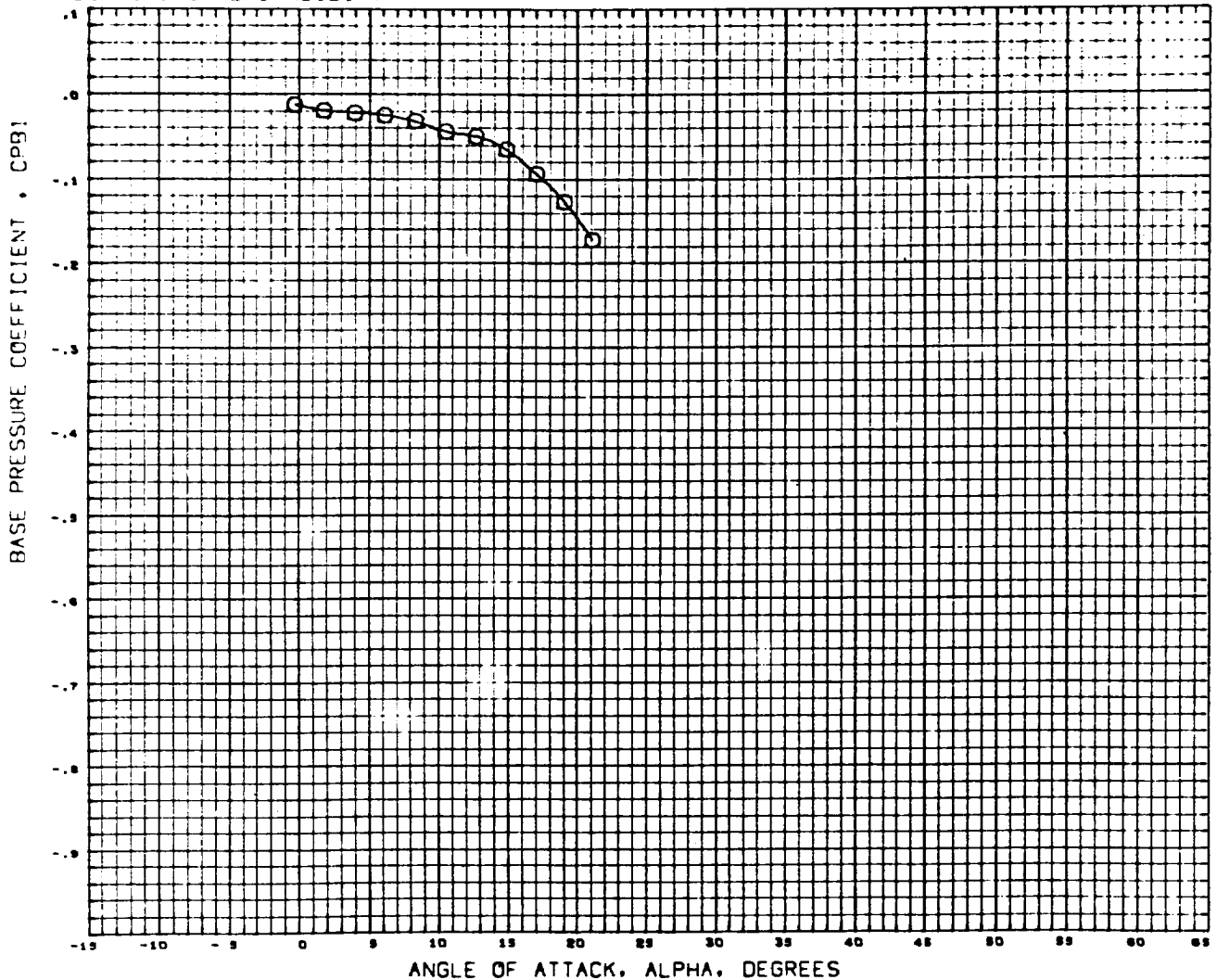


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	XREF
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		0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
		0.000	0.000	0.000	0.000	0.0000	0.0000	0.0025

DATA HIST. CODE M#E

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LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD		
○	0.599	0.000	0.000	0.000	0.000	BREF	7.7005 IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE M&E

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LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN



ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL
O

MACH
0.399

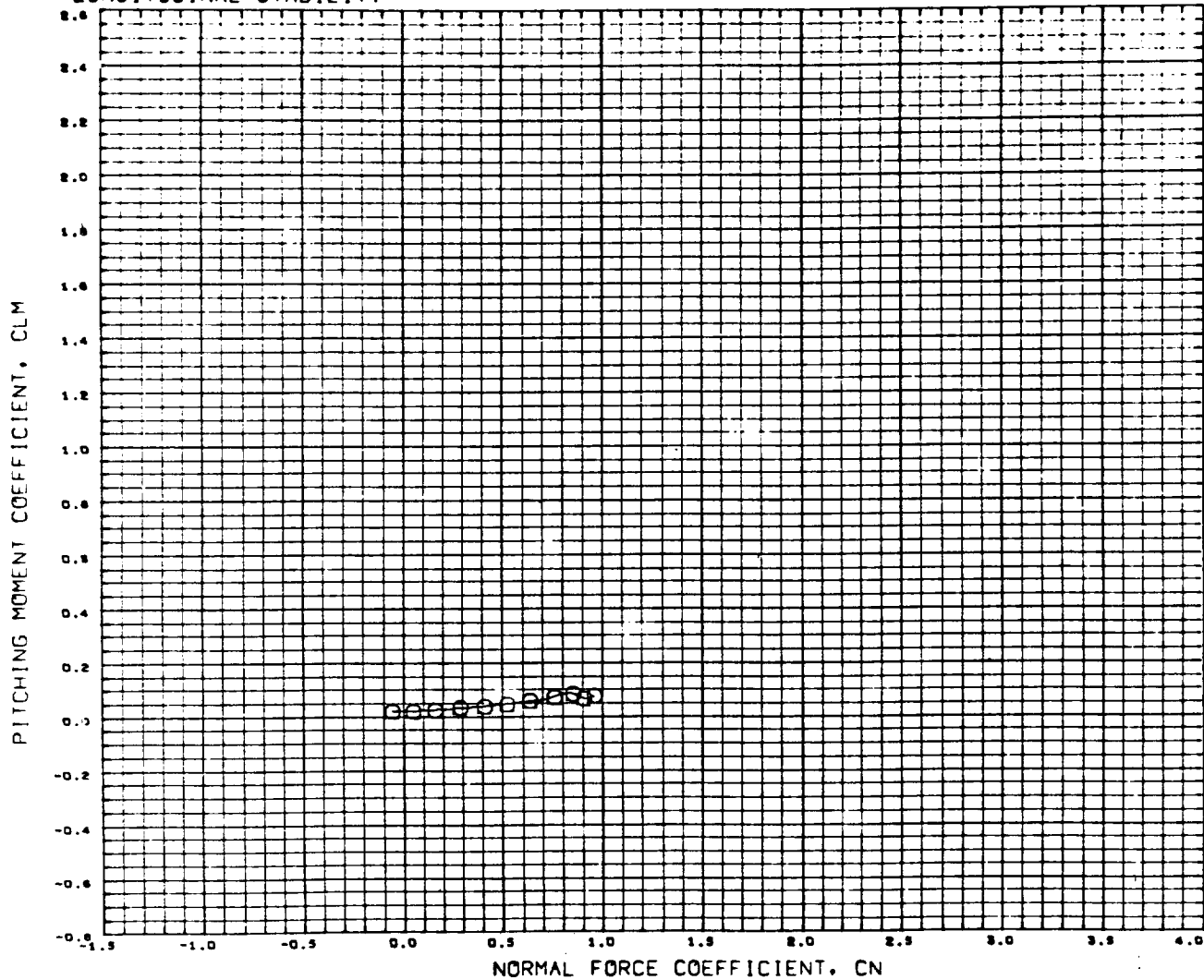
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DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	7.7003	50. IN.
LREF	3.1700	IN.
SRFP	4.3920	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE M+E

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LONGITUDINAL STABILITY

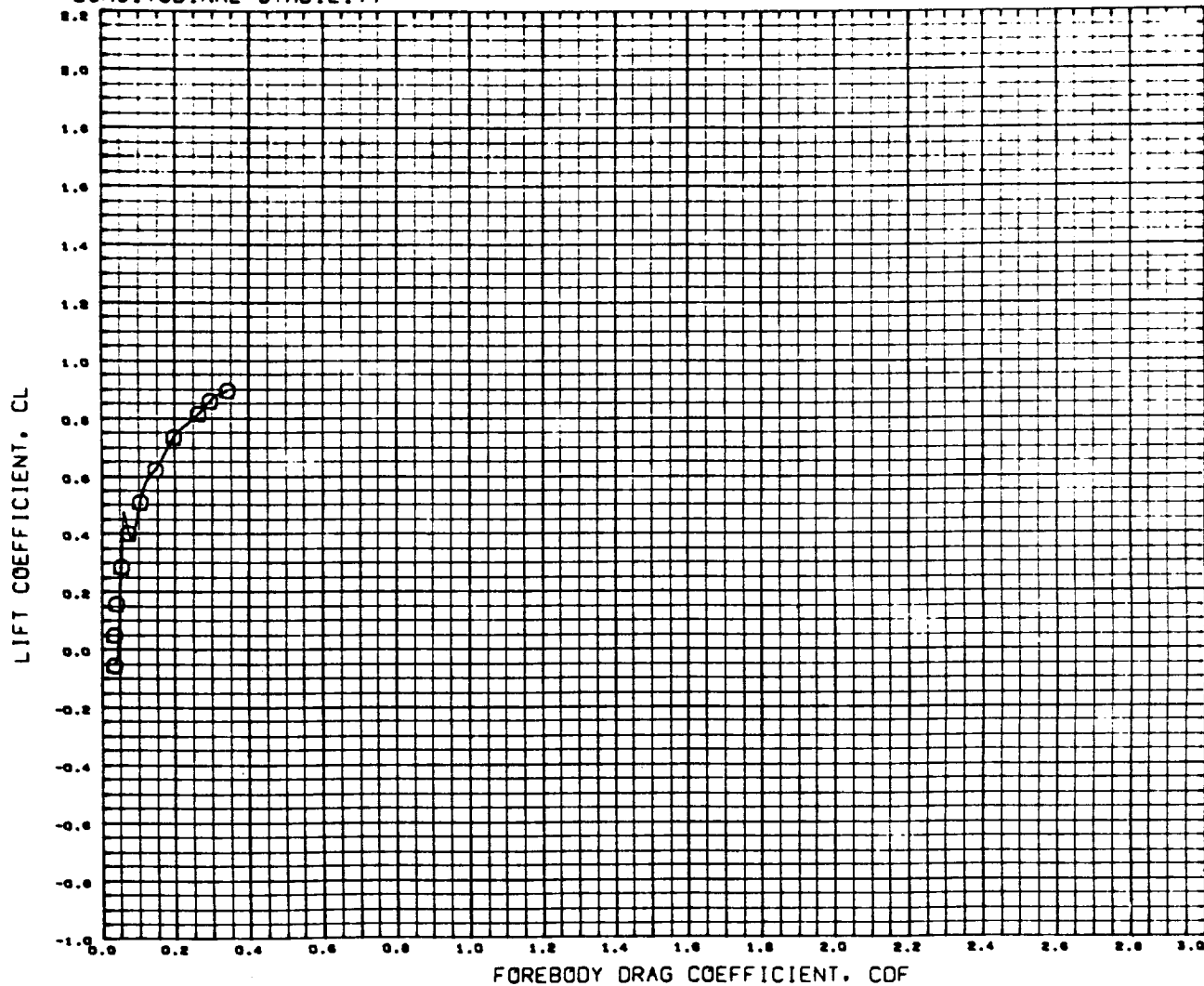


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		AILRON	0.000	CANARD	0.000	SREF	4.3925	IN.
						EMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE M&E

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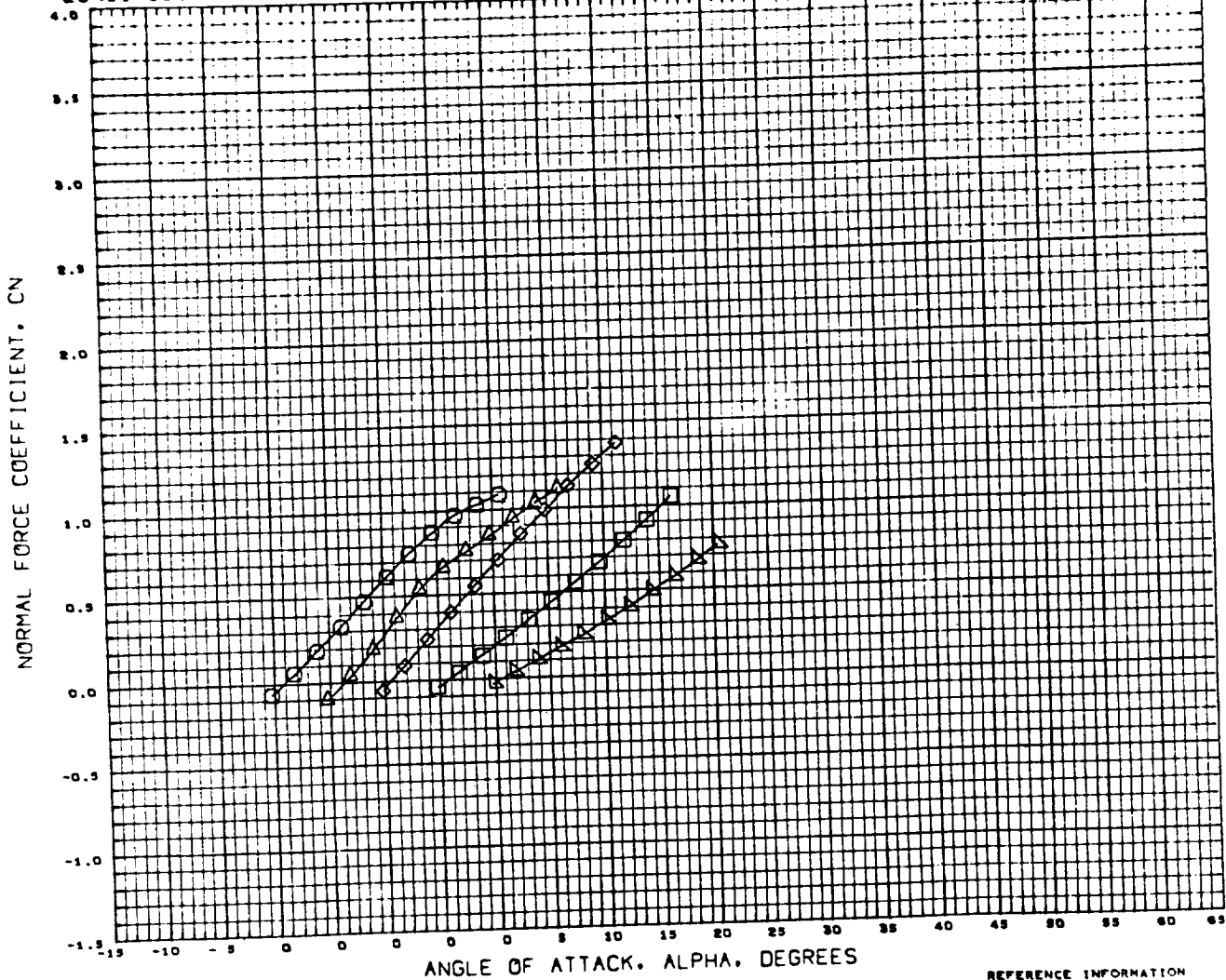
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.599	BETA	0.000	DEL	0.000	SREF	7.7005	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		ATLRON	0.000	CANARD	0.000	BREF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE M+E M496-MSFC AR11981-3 MODEL W982C12V1 (E3824A) 06 SEP 72 PAGE 90

LONGITUDINAL STABILITY



SYMBOL	PARAMETRIC VALUES			
	MACH	BETA	DEL	0.000
	0.999	0.000	ELEVTR	0.000
	0.905	0.000	CANARD	0.000
	1.197	0.000		
1.963	3.400			

REFERENCE INFORMATION		
SREF	4.9327	50. IN.
LREF	1.8960	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

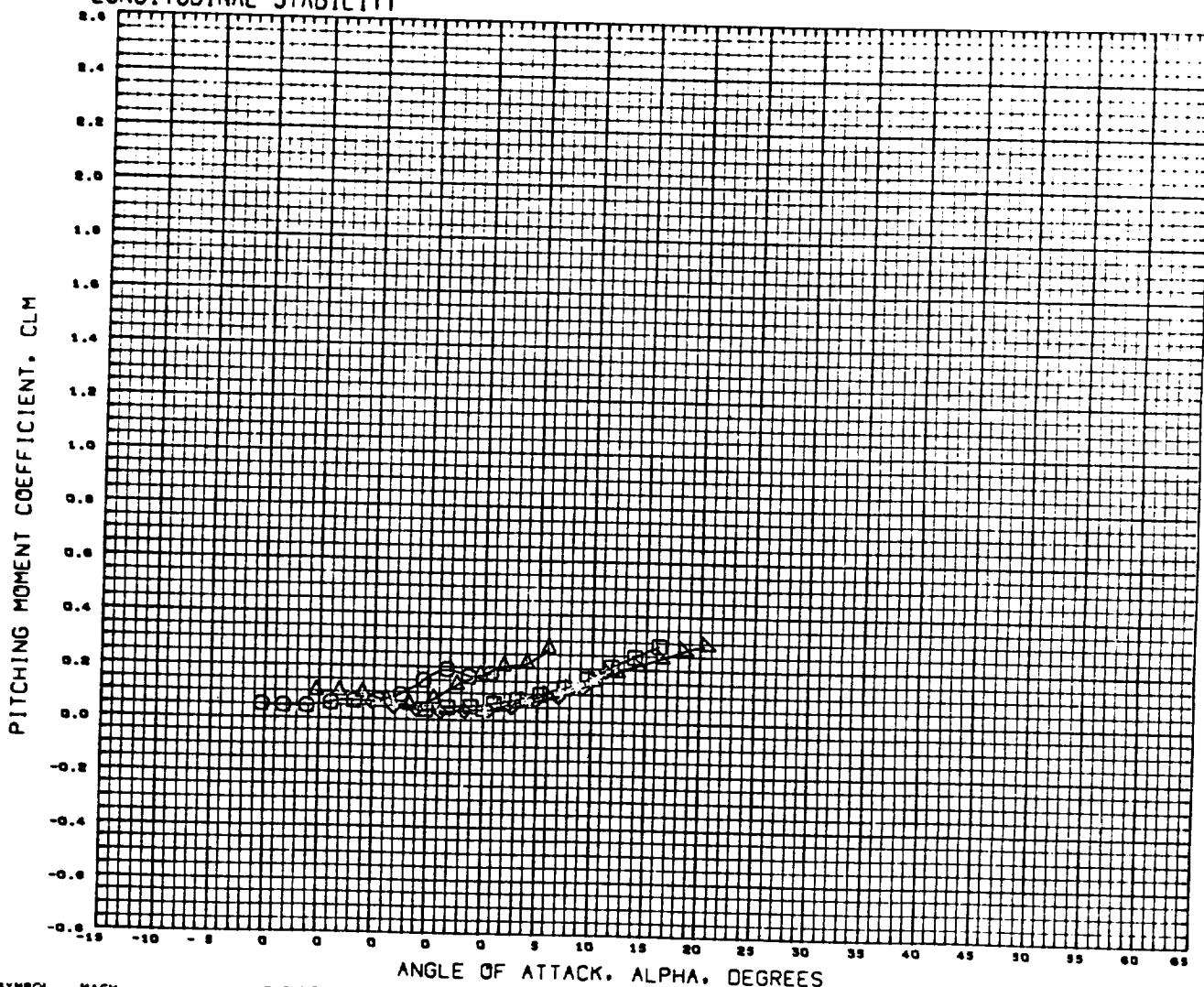
W482C12V2

(E3829A) 06 SEP 72

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LONGITUDINAL STABILITY



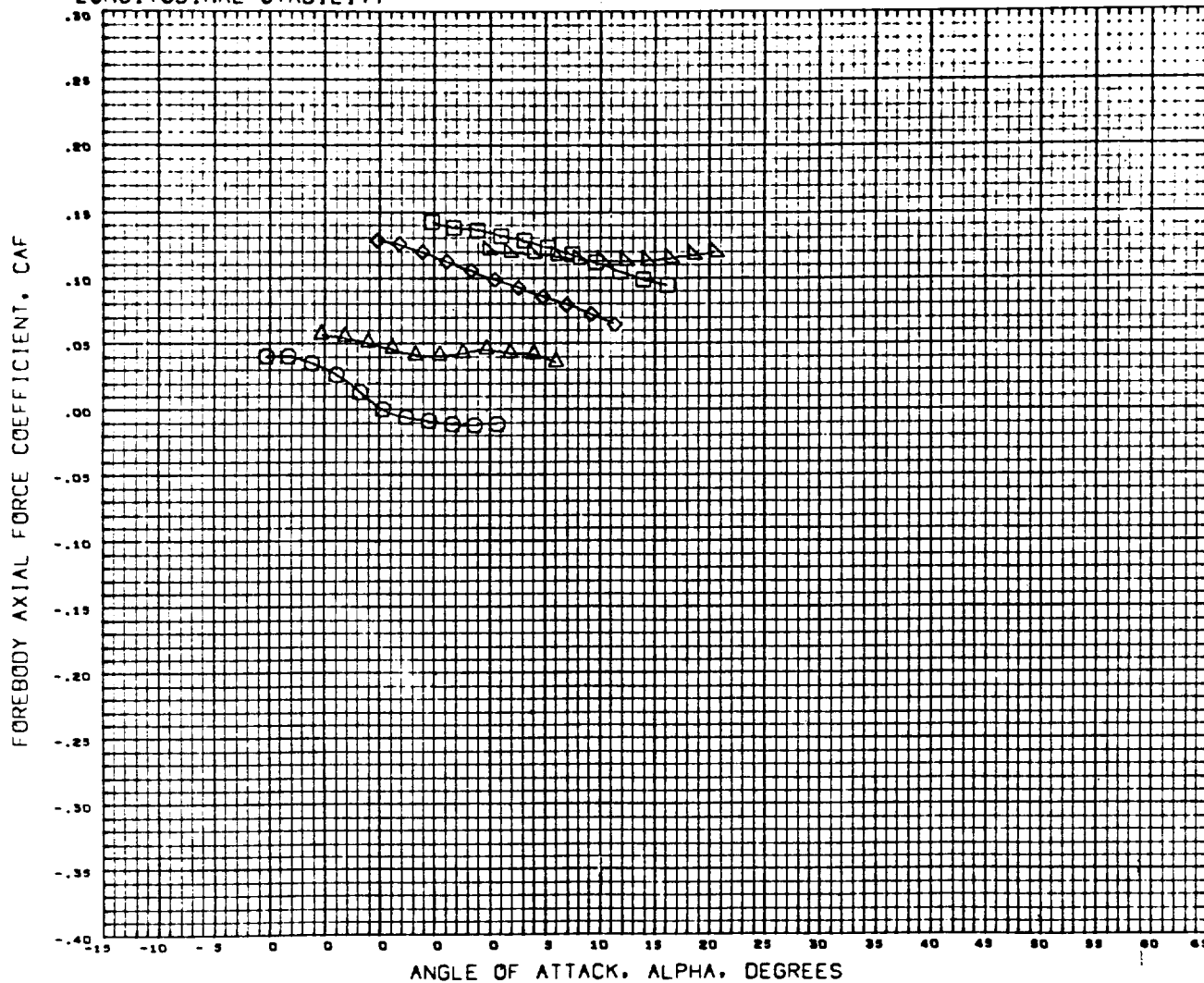
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◇◇◇◇	1.197	ATLRON	0.000	CANARD	0.000
◇◇◇◇	1.983				
◇◇◇◇	3.490				

DATA HIST. CODE *E

REFERENCE INFORMATION		
SREF	4.9327	80. IN.
LREF	1.8980	IN.
BREF	3.7200	IN.
XMRF	2.4000	IN.
YMRF	0.0000	IN.
ZMRF	0.0000	IN.
SCALE	0.0025	

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LONGITUDINAL STABILITY

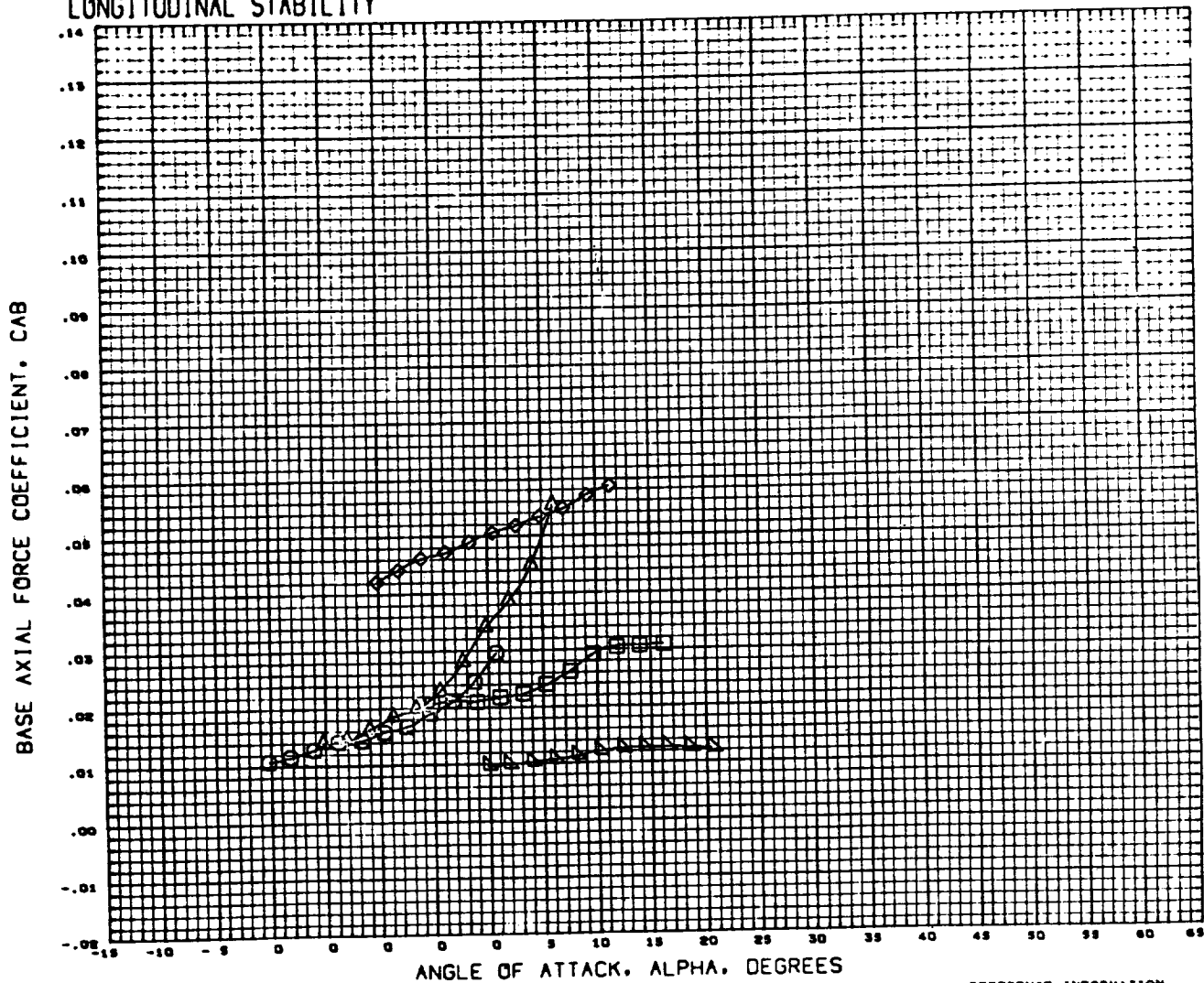


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	SQ. IN.
○	0.599	0.000	0.000	0.000	0.000	LREF	1.8980
△	0.905	0.000	0.000	0.000	0.000	SREF	3.7200
□	1.197	0.000	0.000	0.000	0.000	XMRP	2.4000
◇	1.963	0.000	0.000	0.000	0.000	YMRP	0.0000
◇	3.450	0.000	0.000	0.000	0.000	ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W4B2C12V2 (E3829A) 06 SEP 72 PAGE 93

LONGITUDINAL STABILITY

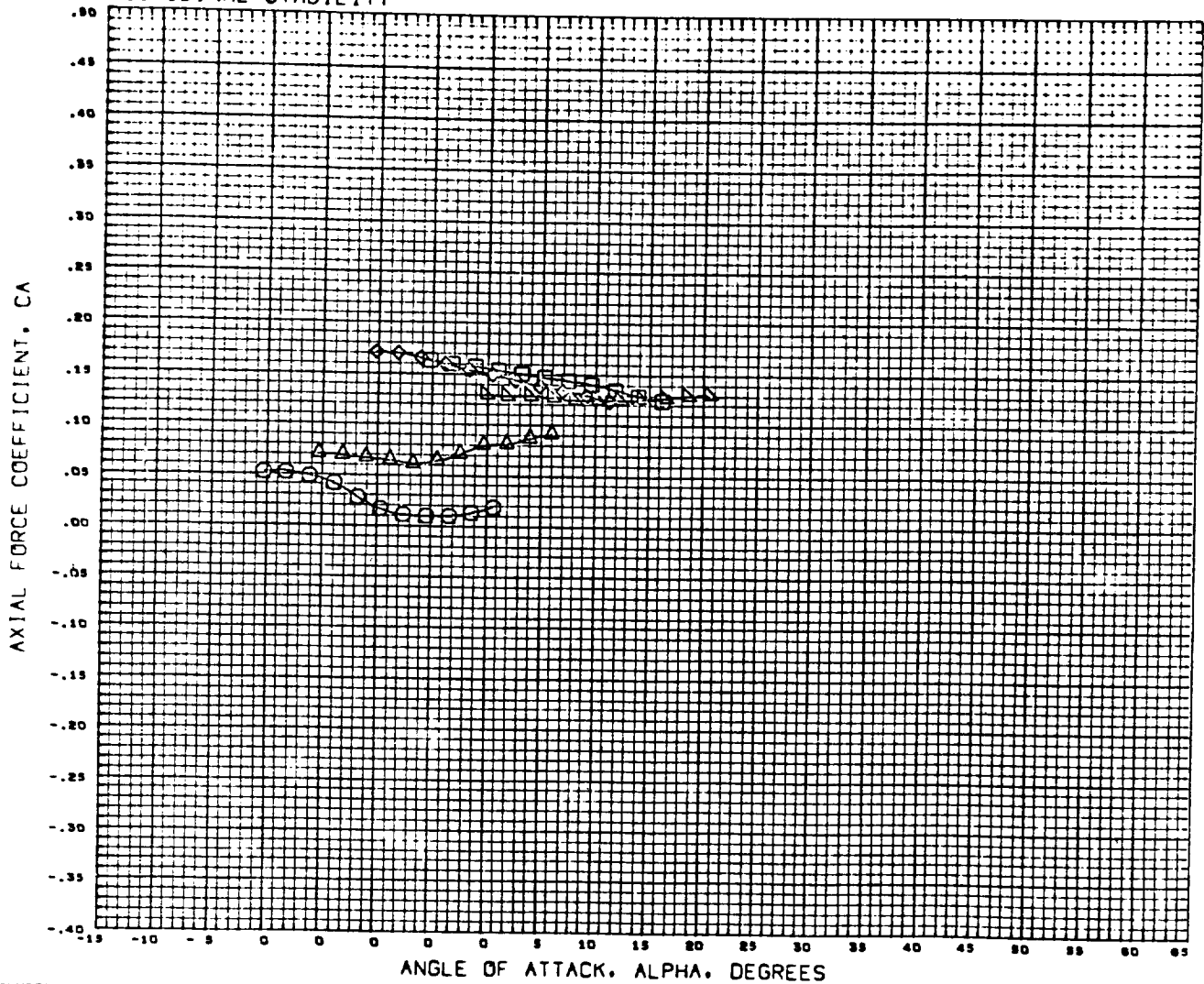


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	SG, IN.
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◇	0.903	0.000	0.000	0.000	0.000	1.8980	IN.
◇	1.197	0.000	0.000	0.000	0.000	3.7200	IN.
◇	1.983	0.000	0.000	0.000	0.000	2.4000	IN.
◇	3.480	0.000	0.000	0.000	0.000	0.0000	IN.

DATA HIST. CODE *E

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LONGITUDINAL STABILITY



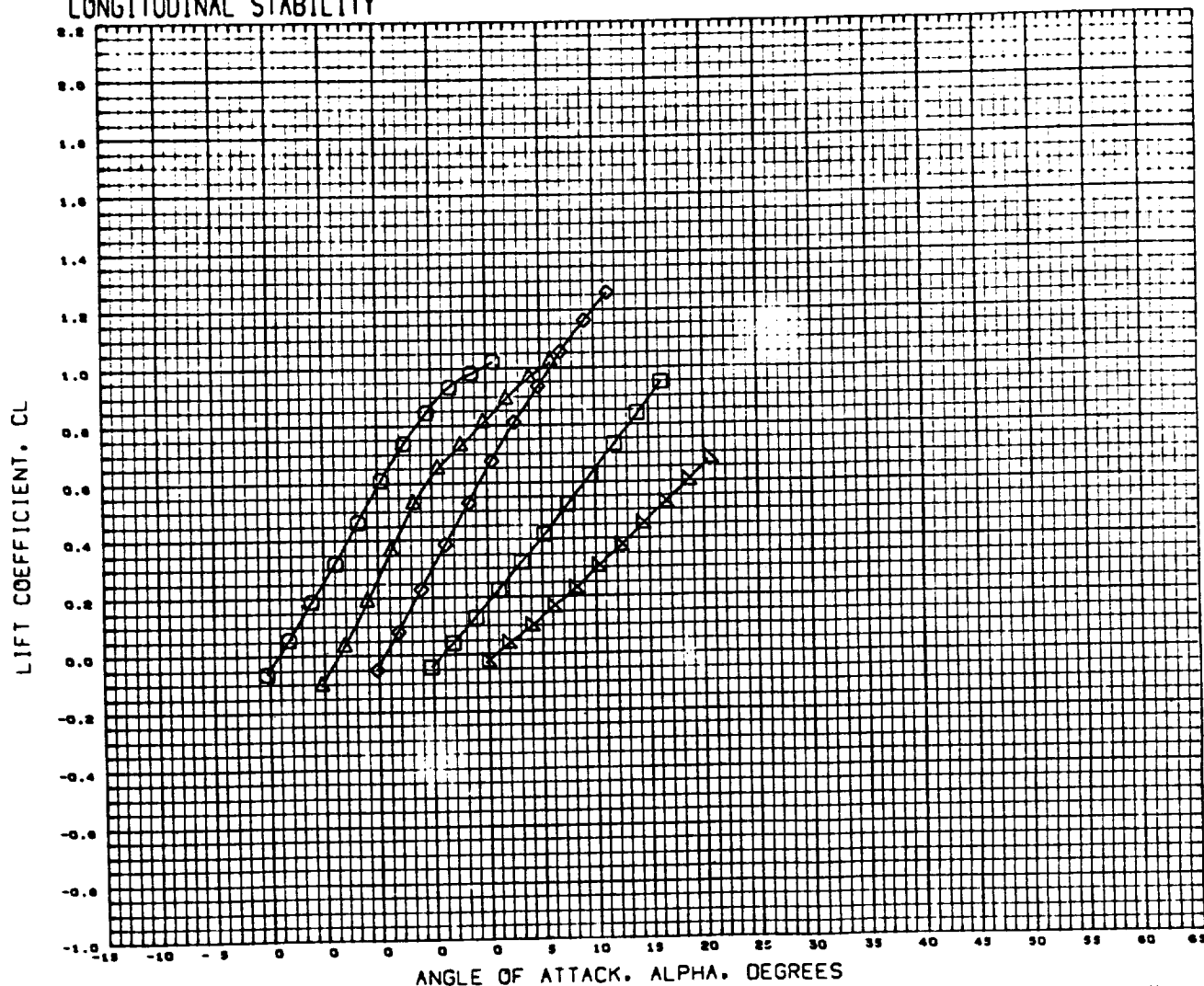
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△	0.905	DER	0.000	ELEVTR	0.000
□	1.197	AILRON	0.000	CANARD	0.000
◇	1.963				
◊	3.490				

DATA HIST. CODE *E

REFERENCE INFORMATION		
BREF	4.9327	80 IN.
LRFP	1.8960	IN.
BRFP	3.7200	IN.
XRFP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

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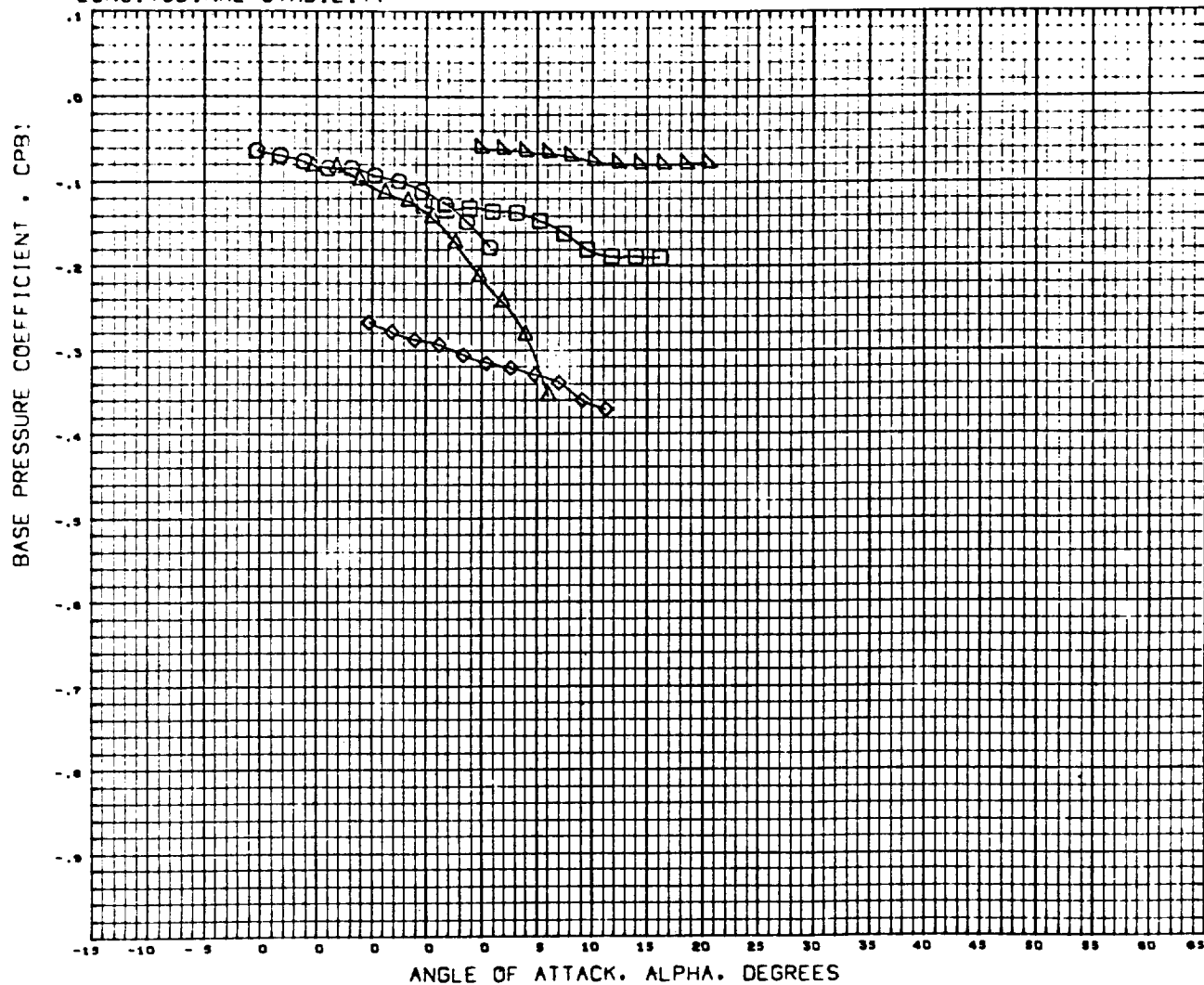
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	SQ. IN.
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◇	0.905	0.000	0.000	0.000	0.000	1.6960	IN.
△	1.197	0.000	0.000	0.000	0.000	3.7200	IN.
□	1.963	0.000	0.000	0.000	0.000	2.4000	IN.
▽	3.490	0.000	0.000	0.000	0.000	0.0000	IN.
						SCALE	0.0025

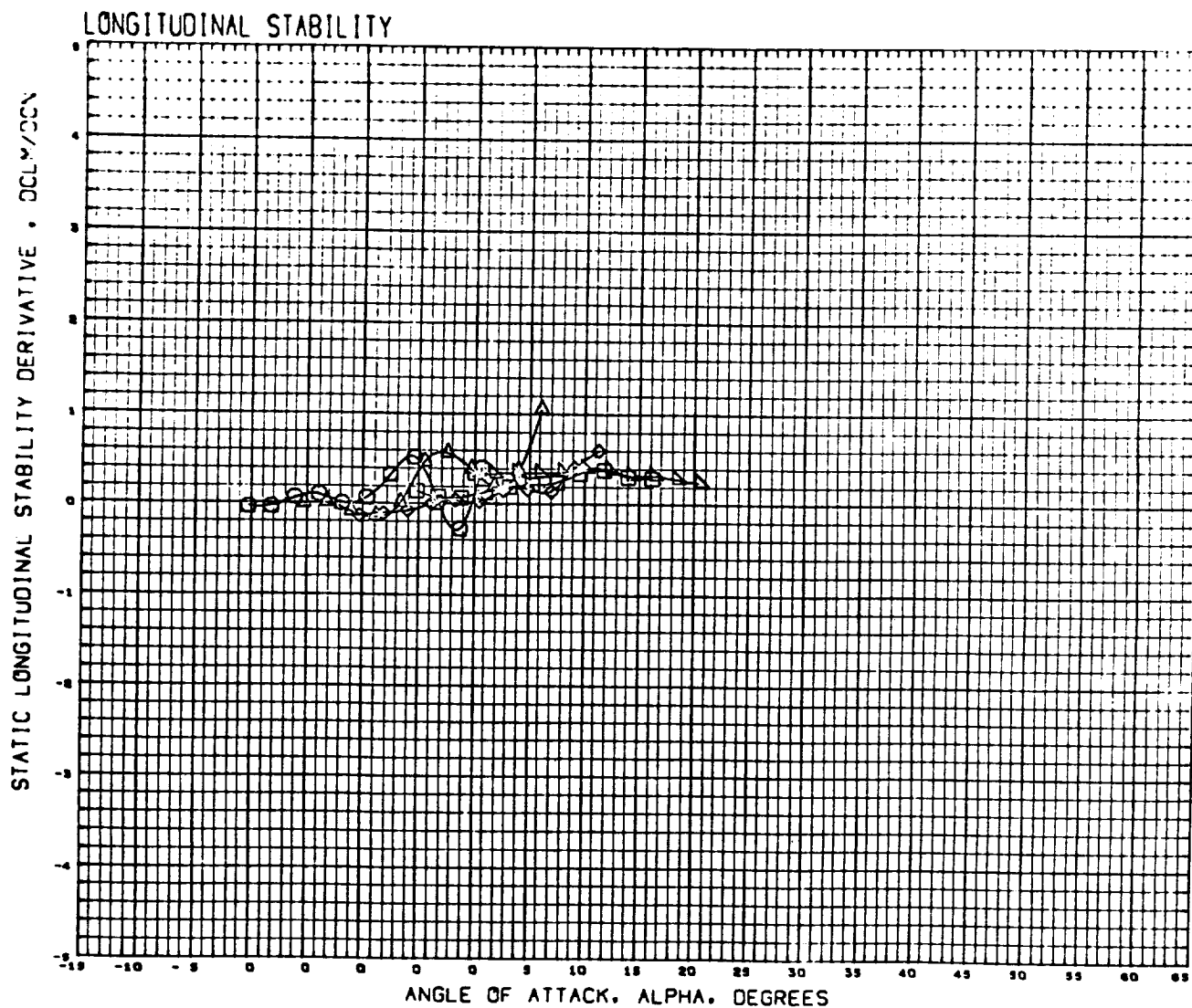
DATA HIST. CODE *E

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	YREF
○	0.999	0.000	0.000	0.000	0.000	4.9327	1.8980	3.7200
□	0.905	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
△	1.197	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0025
◇	1.963	0.000	0.000	0.000	0.000			
◇	3.490							

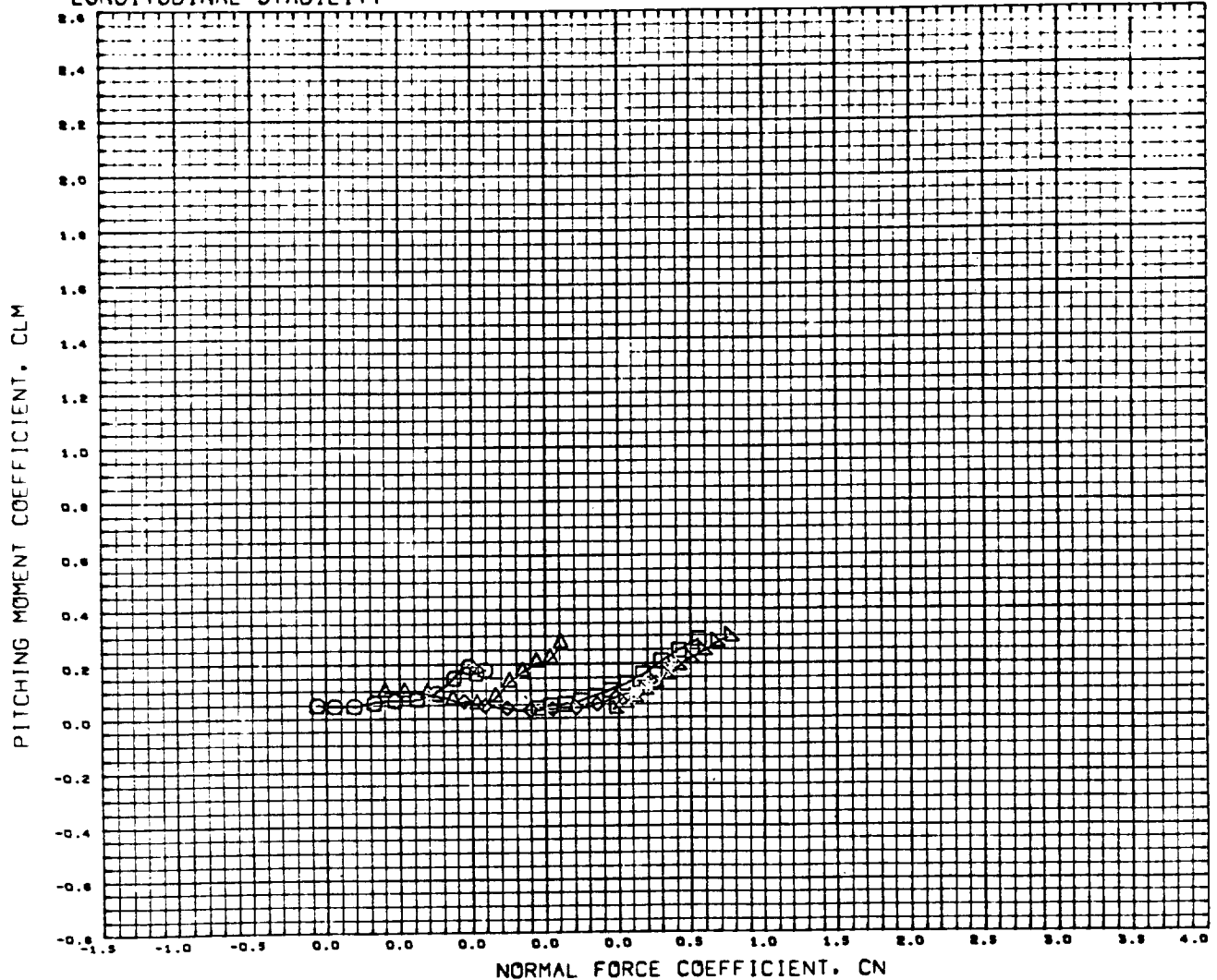
DATA HIST. CODE *E



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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◇	0.905	DER	0.000	ELEVTR	0.000	LREF	1.8980	1N.
◻	1.197	ATLROM	0.000	CANARD	0.000	BREF	3.7800	1N.
◻	1.983					YMRP	2.4000	1N.
◻	3.490					ZMRP	0.0000	1N.
		DATA HIST. CODE	*E			SCALE	0.0025	

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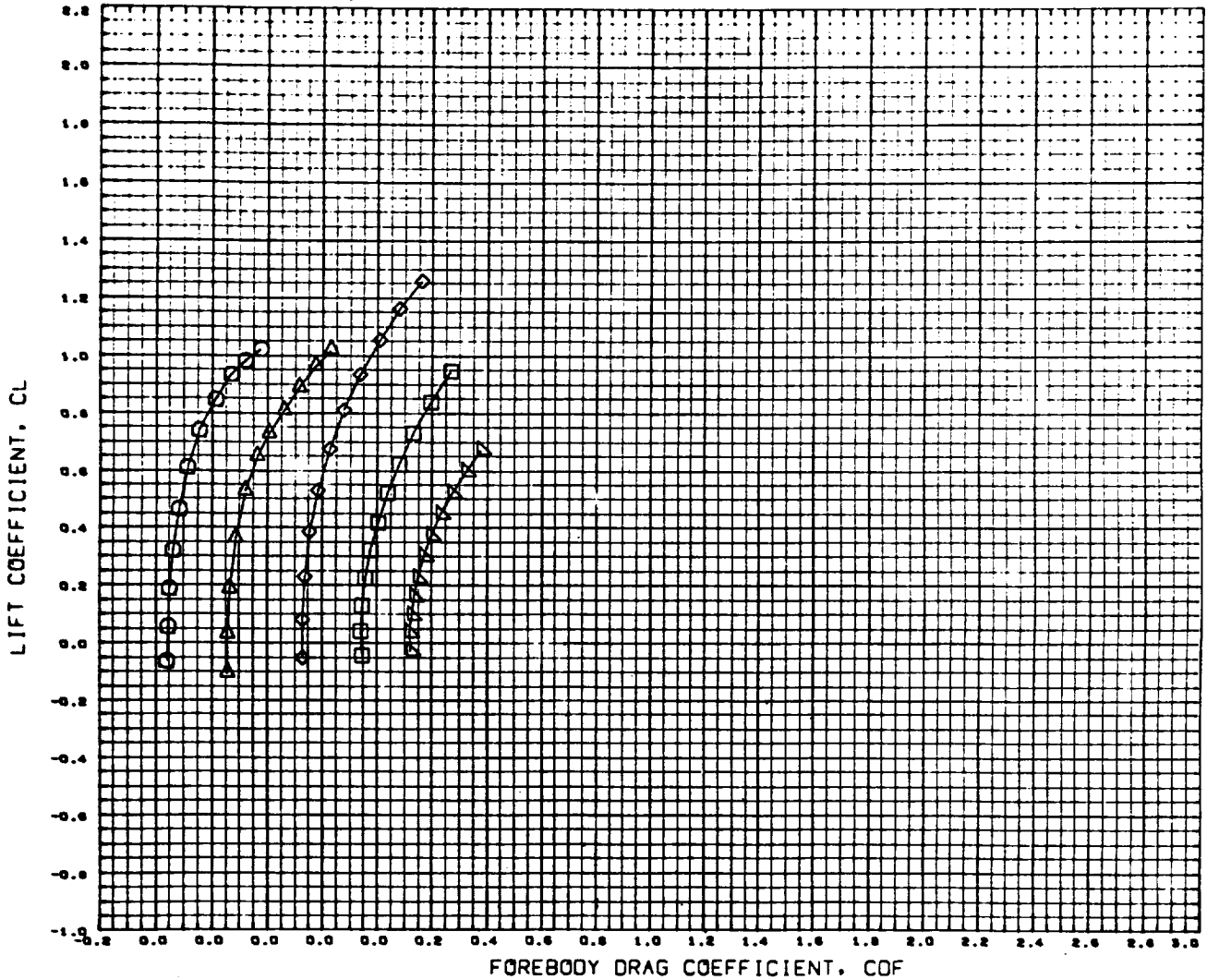
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SREF	SG. IN.
<div> <div>○</div> <div>◇</div> <div>◇</div> <div>◇</div> <div>◇</div> </div>	0.599	0.000	0.000	0.000	0.000	4.9327	50. IN.
	0.905	0.000	0.000	0.000	0.000	1.0560	IN.
	1.197	0.000	0.000	0.000	0.000	3.7200	IN.
	1.963	0.000	0.000	0.000	0.000	2.4000	IN.
	3.480	0.000	0.000	0.000	0.000	0.0000	IN.

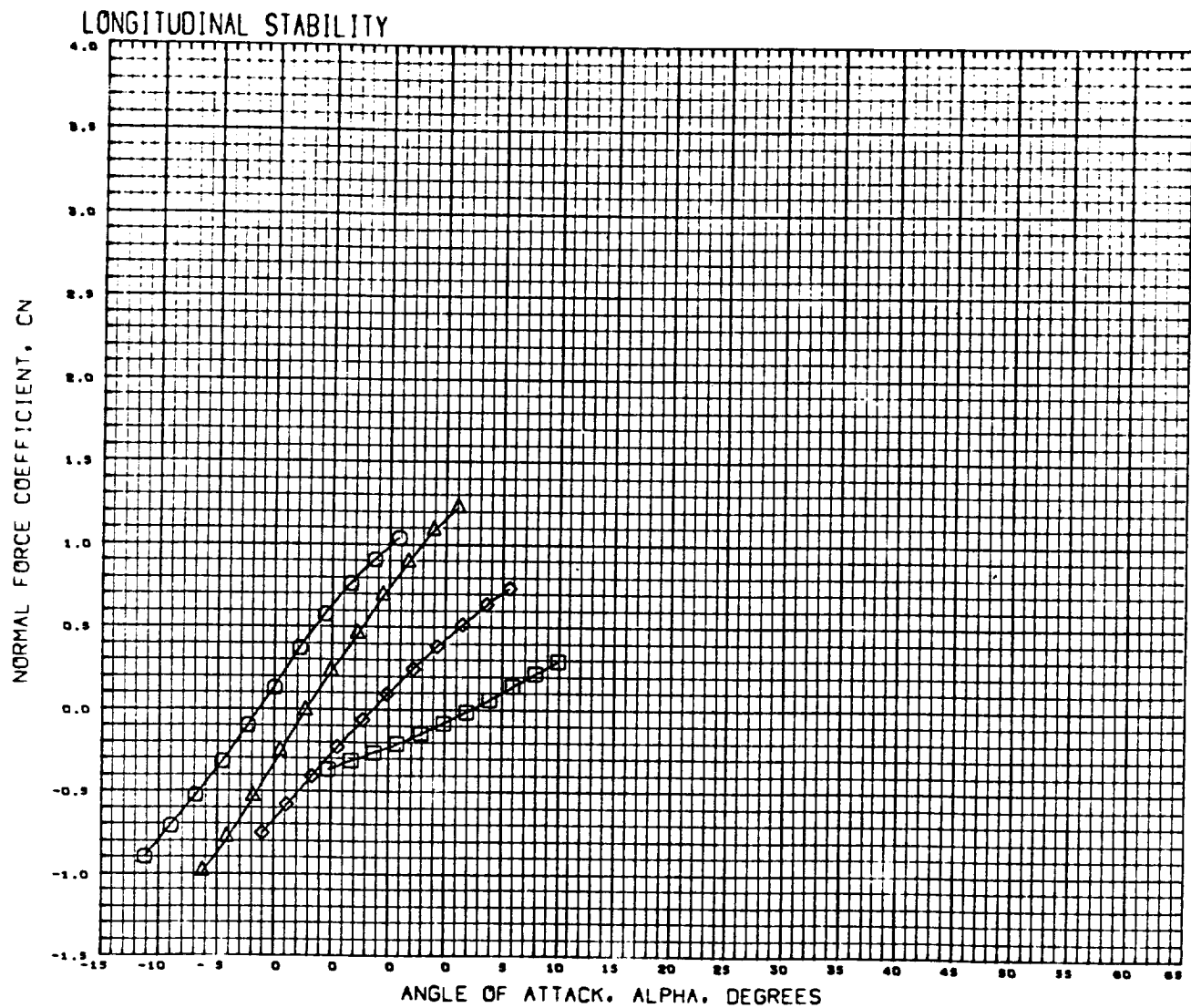
DATA HIST. CODE *E

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.599	BETA	0.000	DEL	0.000	SREF	4.9327	50. IN.
◇	0.909	DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
△	1.197	AILRON	0.000	CANARD	0.000	BREF	3.7200	IN.
□	1.963					XMRP	2.4000	IN.
▽	3.480					YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E



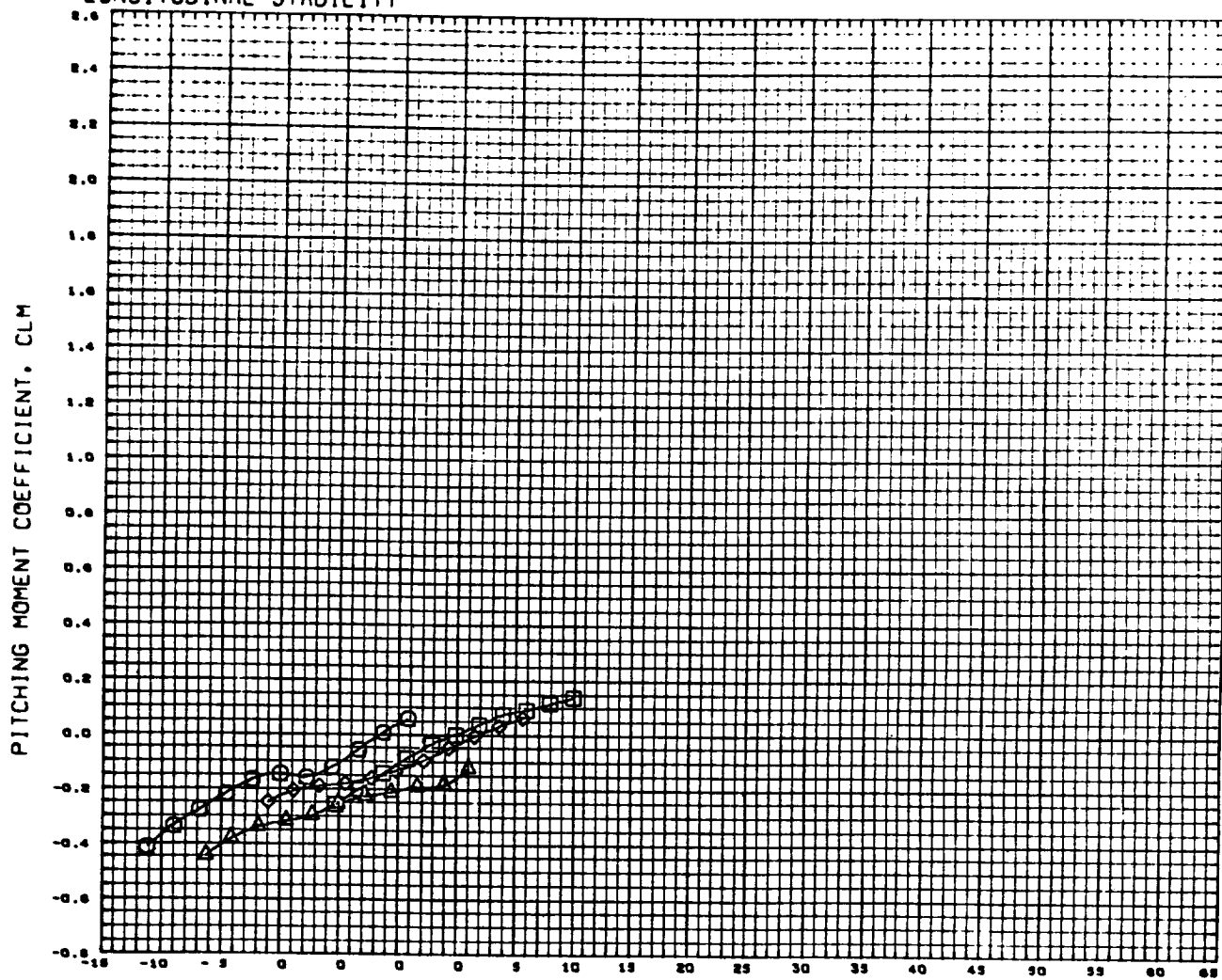
SYMBOL	MACH	PARAMETRIC VALUES			
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△	1.004	DER	0.000	ELEVTR	0.000
◇	1.959	AILRON	0.000	CANARD	0.000
□	4.959				

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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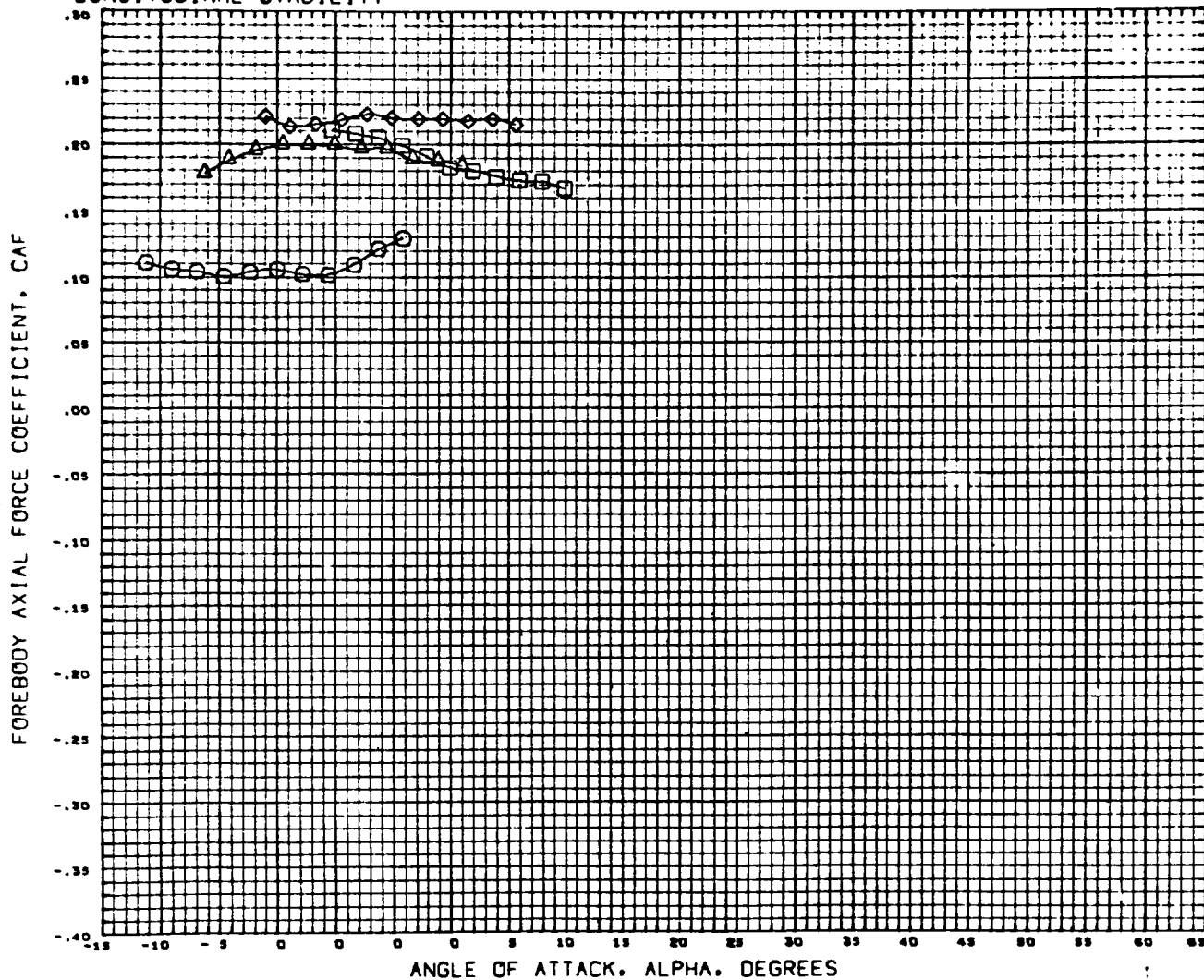
LONGITUDINAL STABILITY



SYMBOL		PARAMETRIC VALUES						REFERENCE INFORMATION	
○	MACH	0.901	BETA	0.000	DEL	0.000		SREF	4.6225
□		1.004	DER	0.000	ELEVTR	0.000		LREF	1.5360
△		1.959	AILRON	0.000	CANARD	0.000		BREF	4.3000
◇		4.959						XMRP	2.4000
								YMRP	0.0000
								ZMRP	0.0000
								SCALE	0.0025

DATA HIST. CODE *E

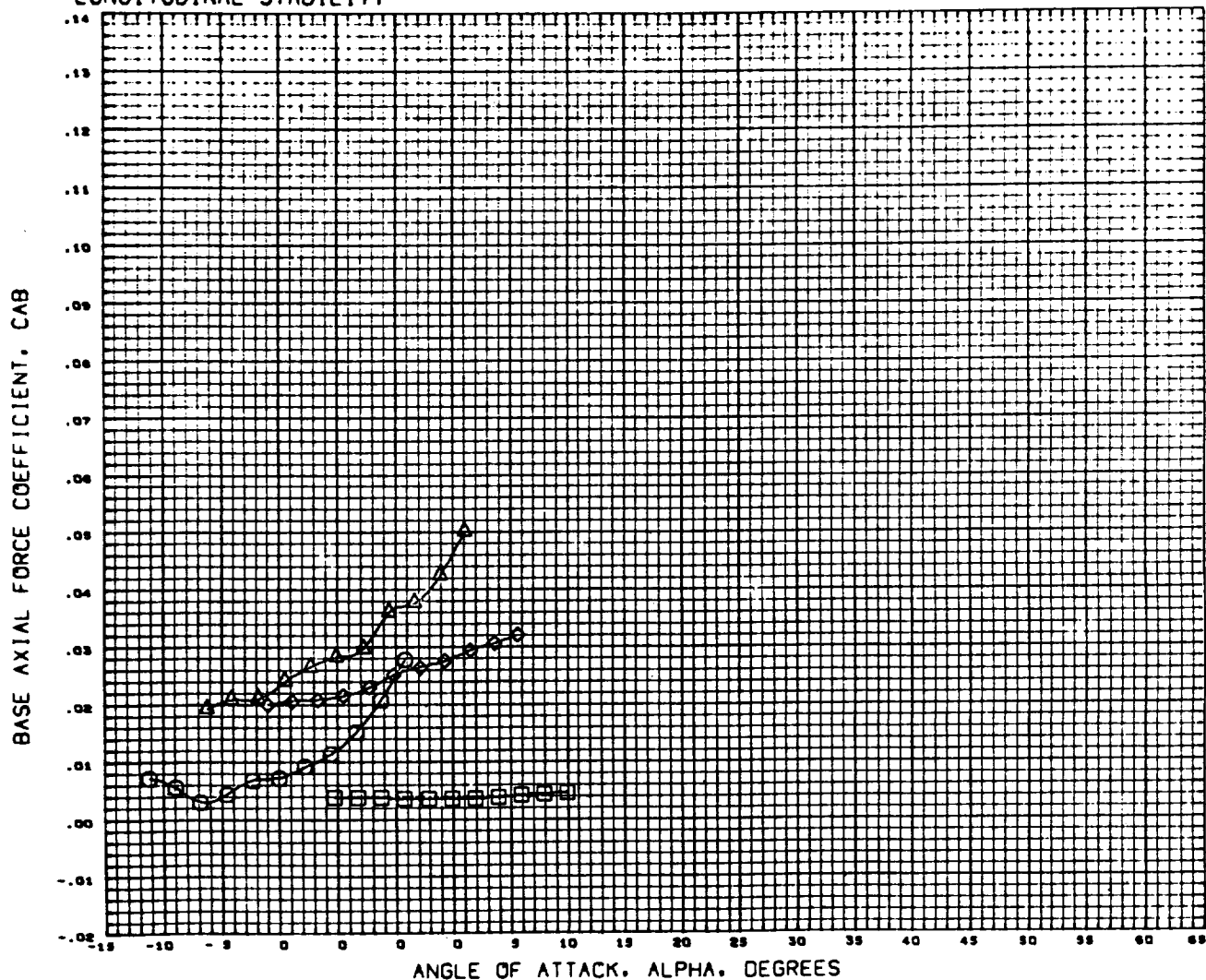
LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	ELEVTR	CANARD	REFERENCE INFORMATION
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△	1.004		0.000	0.000	0.000		LREF 1.5360 in.
◇	1.959		0.000	0.000	0.000		SREF 4.3000 in.
□	4.959		0.000	0.000	0.000		XMRP 2.4000 in.
							YMRP 0.0000 in.
							ZMRP 0.0000 in.
							SCALE 0.0025

DATA HIST. CODE *E

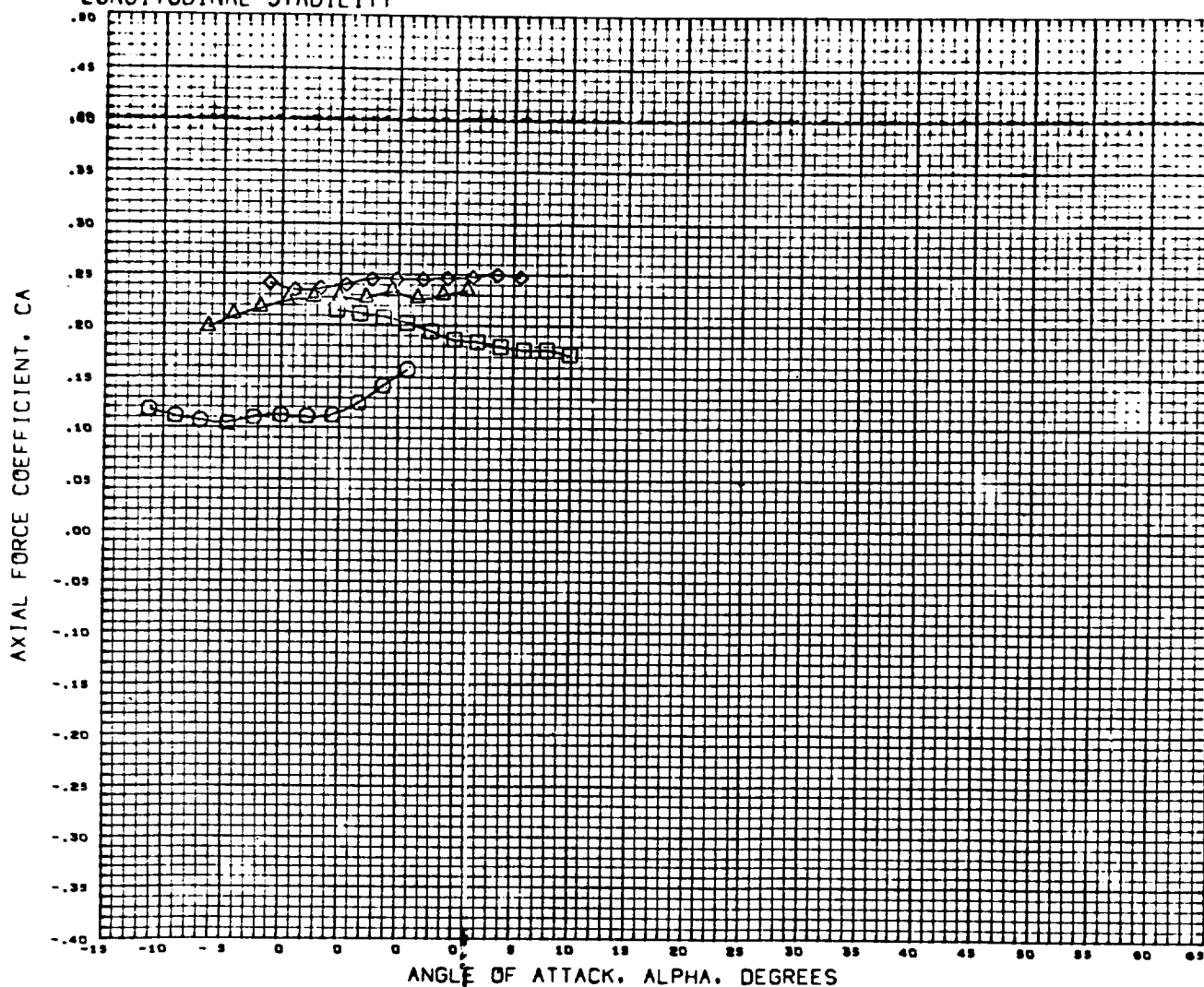
LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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△	1.004	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	1.959	AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
△	0.901	BETA	0.000	DEL	0.000
◇	1.004	DER	0.000	ELEVTR	0.000
□	1.959	AILRON	0.000	CANARD	0.000
○	4.959				

DATA MIST. CODE *E

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	IN.

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MODEL

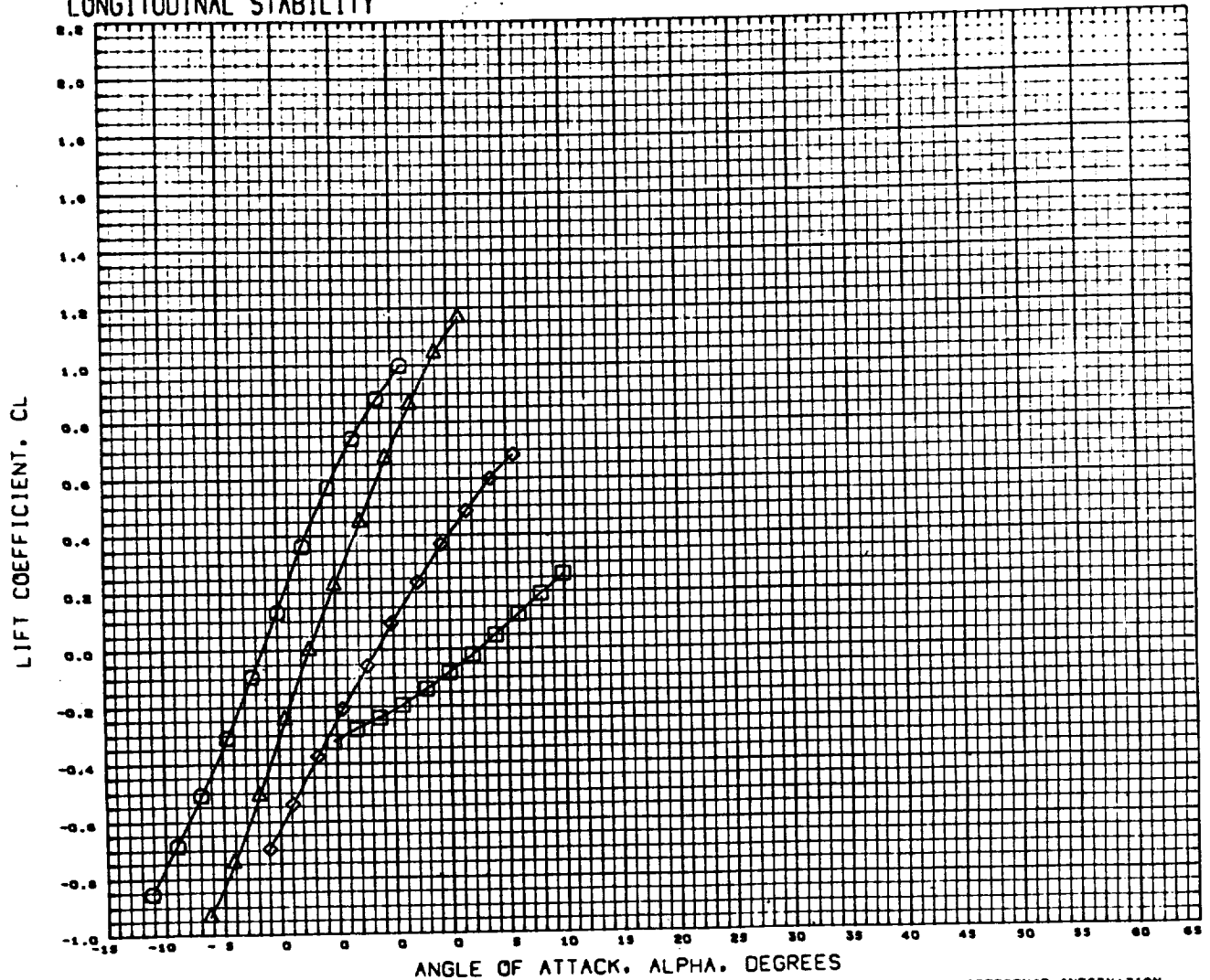
W6B2011C12V2

(E3841C)

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LONGITUDINAL STABILITY



SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	0.000
○	0.901	0.000	DEL	0.000	0.000
△	1.004	0.000	ELEVTR	0.000	0.000
◇	1.999	0.000	CANARD	0.000	0.000
□	4.999	0.000			

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.3365	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

M496-MSFC

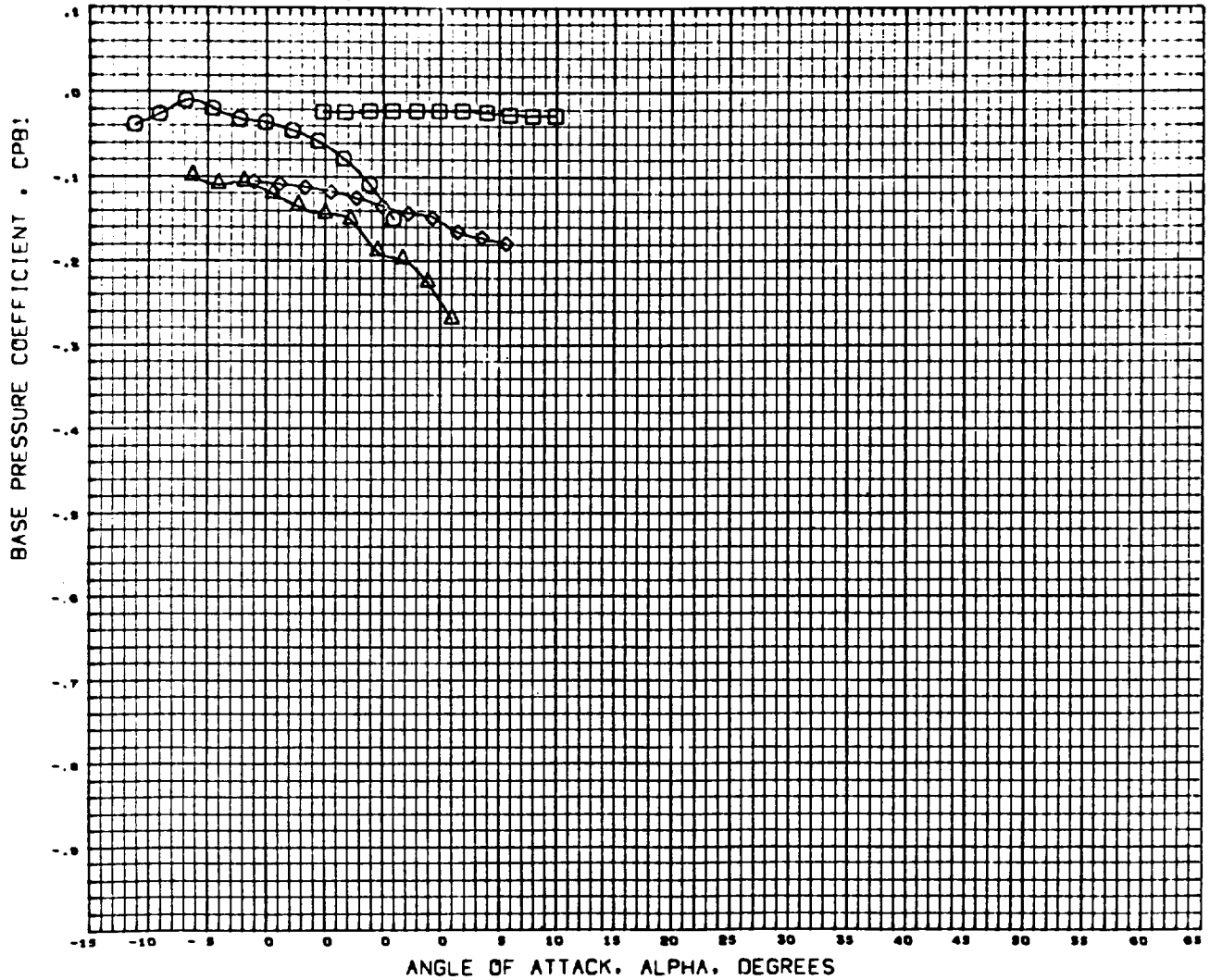
AR11981-3

MODEL

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LONGITUDINAL STABILITY

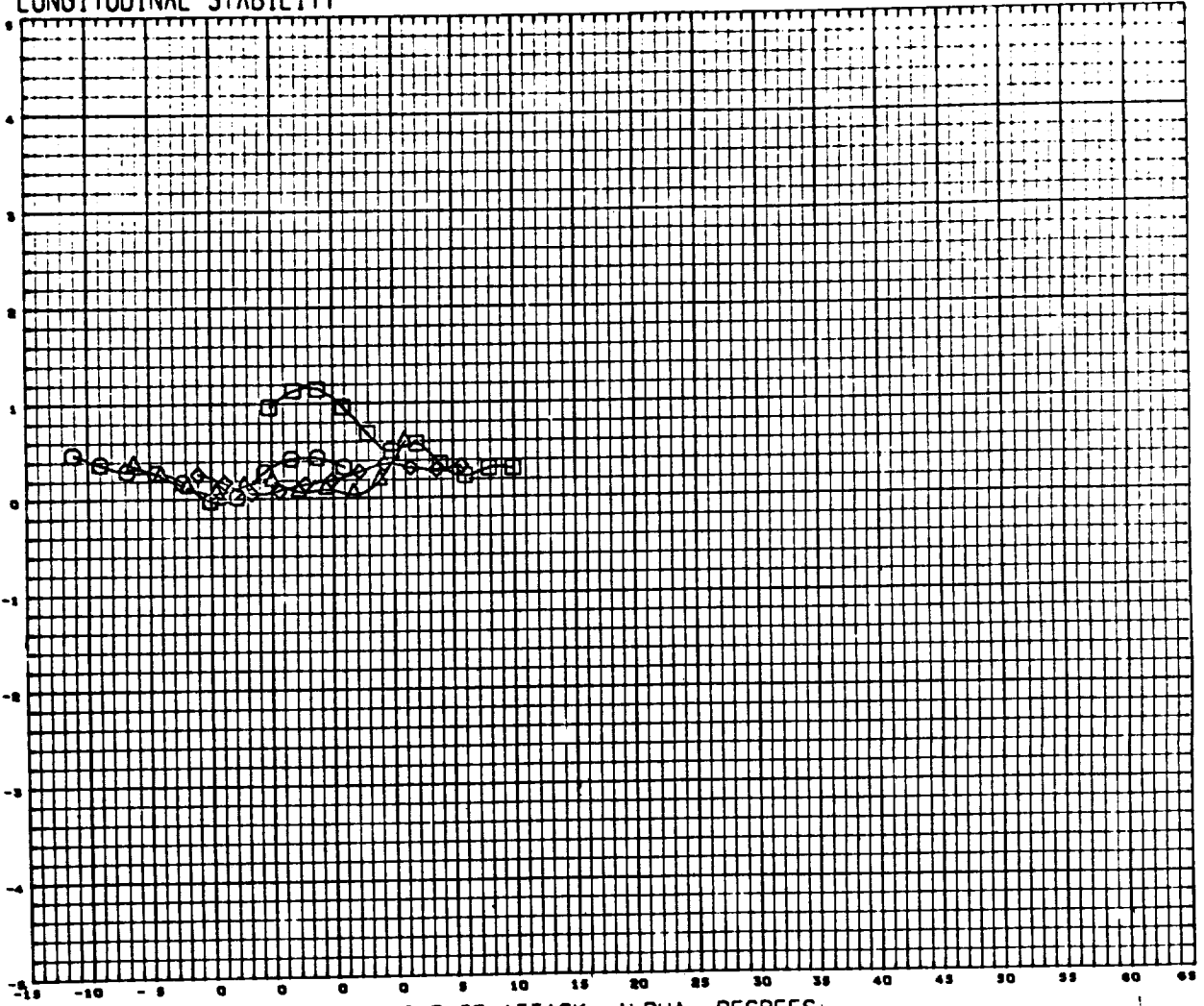


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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◇	1.959	ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • $DC_{L\dot{M}/DCN}$



ANGLE OF ATTACK, ALPHA, DEGREES

SYMBOL	MACH	BETA	PARAMETRIC VALUES	DEL	0.000
○	0.901	0.000	DEL	0.000	0.000
△	1.004	0.000	ELEVTR	0.000	0.000
◇	1.999	0.000	CANARD	0.000	0.000
□	4.999	0.000			

REFERENCE INFORMATION		
SREP	4.6225	50. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 9E

M496-MSFC

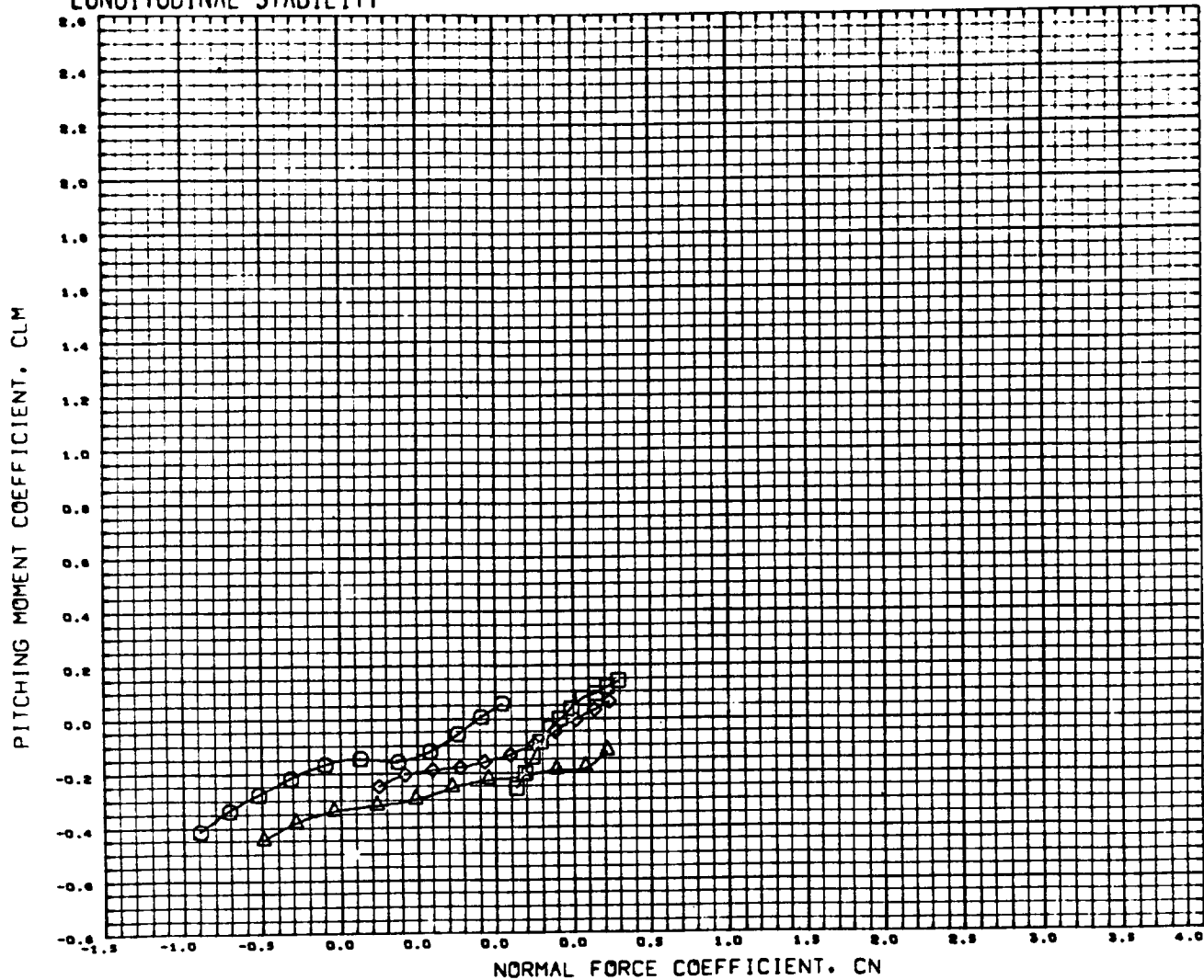
ARI1981-3

MODEL

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LONGITUDINAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.901	BETA	0.000	DEL	0.000
△	1.004	DER	0.000	ELEVTR	0.000
◇	1.959	ATLRON	0.000	CANARD	0.000
□	4.959				

REFERENCE INFORMATION		
BREF	4.6225	SQ. IN.
LREF	1.5360	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

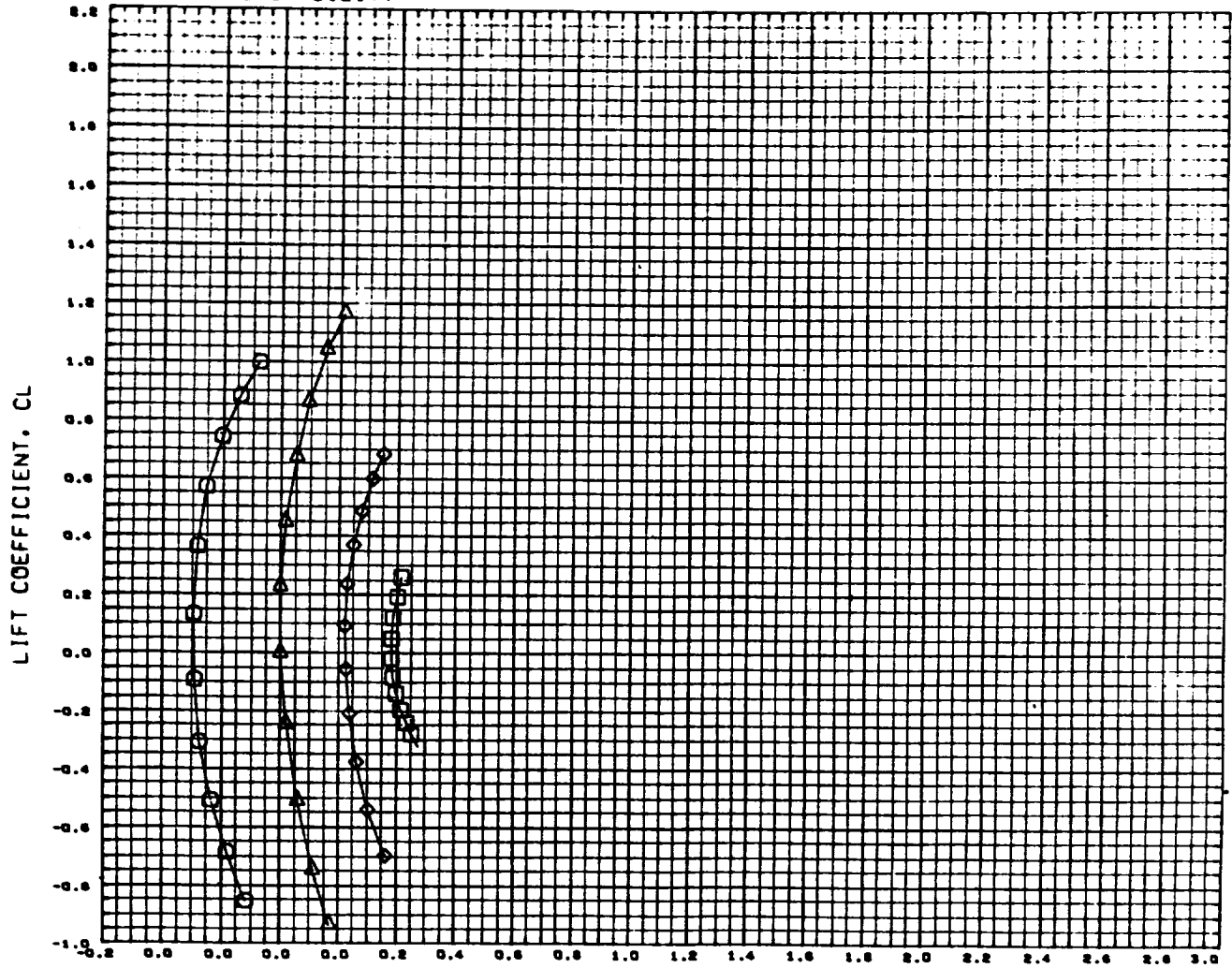
AR11981-3

MODEL

W682011C12V2 (E3841C) 06 SEP 72

PAGE 109

LONGITUDINAL STABILITY

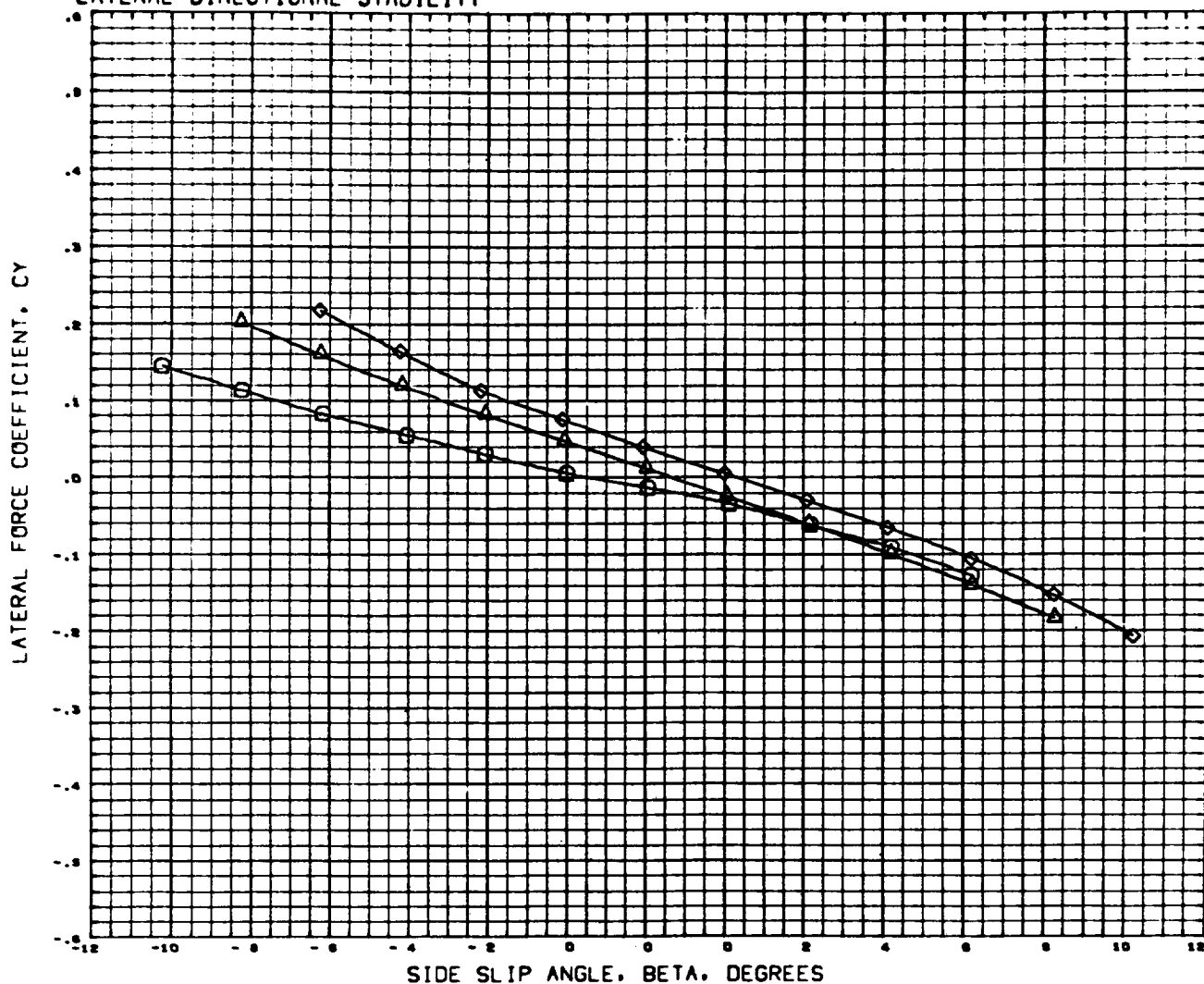


SYMBOL	MACH	BETA	PARAMETRIC VALUES
○	0.901	0.000	DEL 0.000
△	1.004	0.000	ELEVTR 0.000
◇	1.999	0.000	CANARD 0.000
□	4.999	0.000	

REFERENCE INFORMATION		
SREP	4.6223	sq. in.
LREP	1.9360	in.
BREP	4.3000	in.
WREP	2.4000	in.
TWRP	0.0000	in.
ZWRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

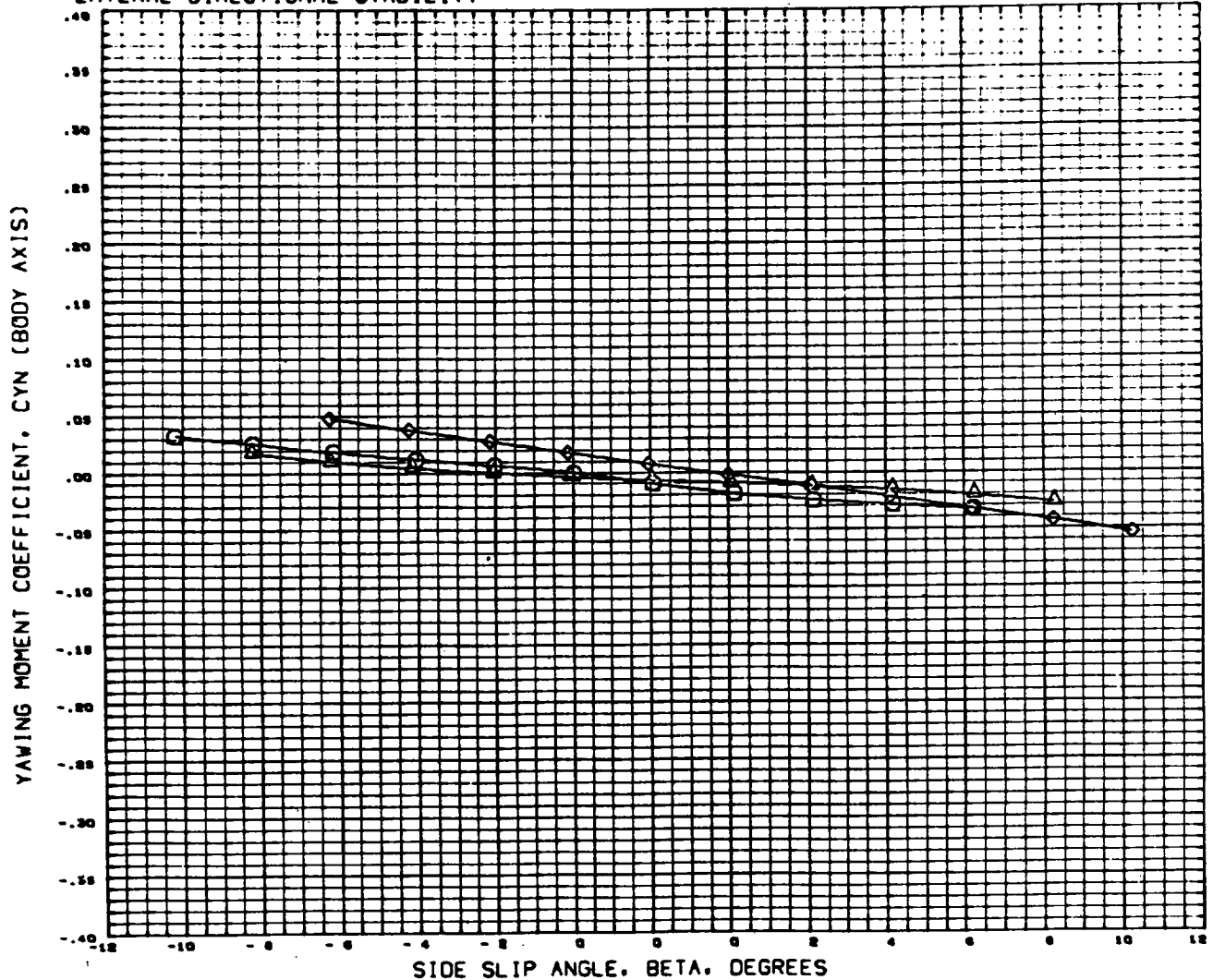
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	0.896	0.000	0.000	0.000	0.000	4.6225	1.5360	4.3000
△	1.200	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
◇	3.480	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0025

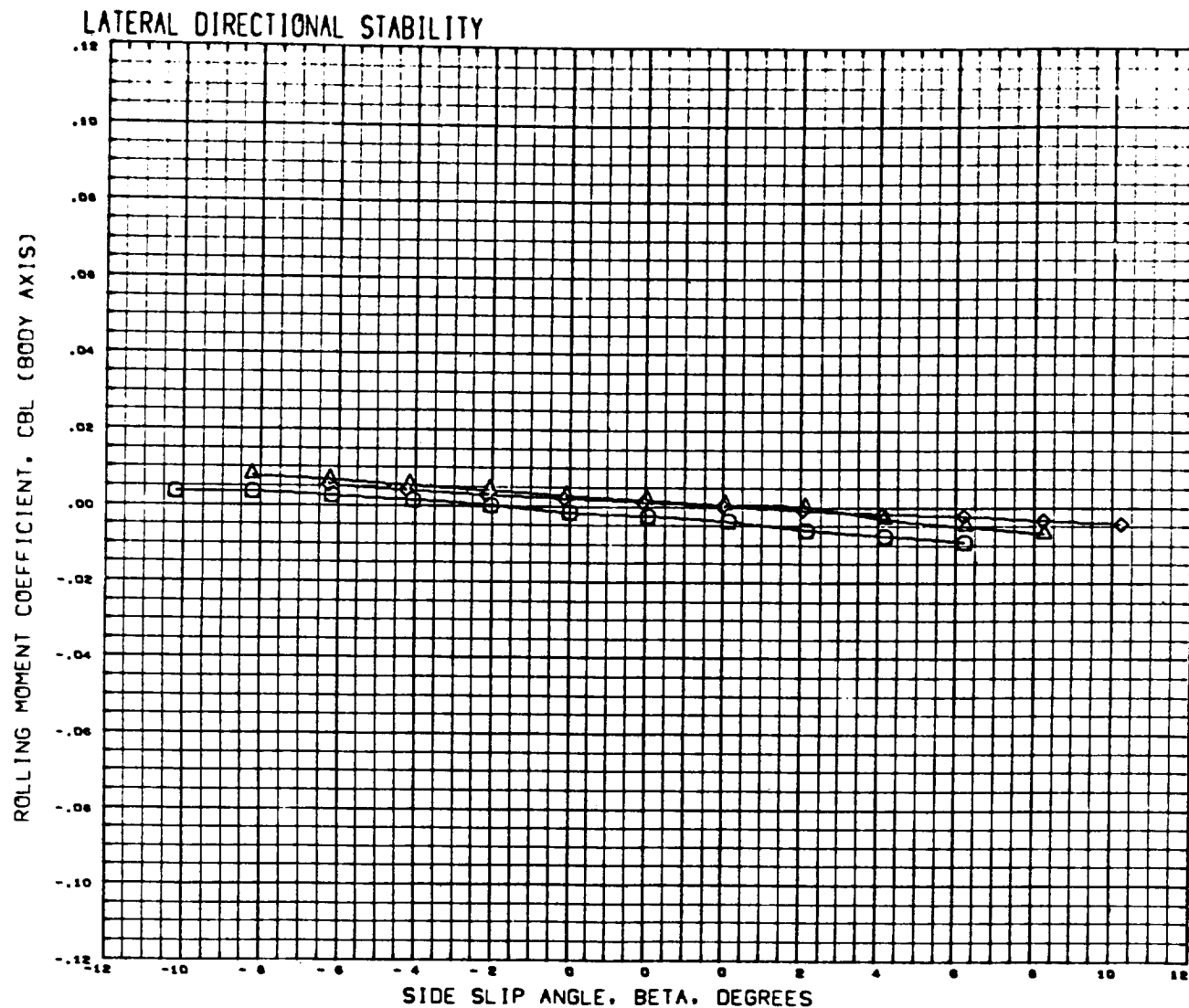
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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	0.896	0.000	0.000	0.000	0.000	4.6225	1.3360	2.4000
△	1.200	0.000	0.000	0.000	0.000	4.3000	1.3360	2.4000
◇	3.480	0.000	0.000	0.000	0.000	4.3000	1.3360	2.4000

DATA HIST. CODE *E



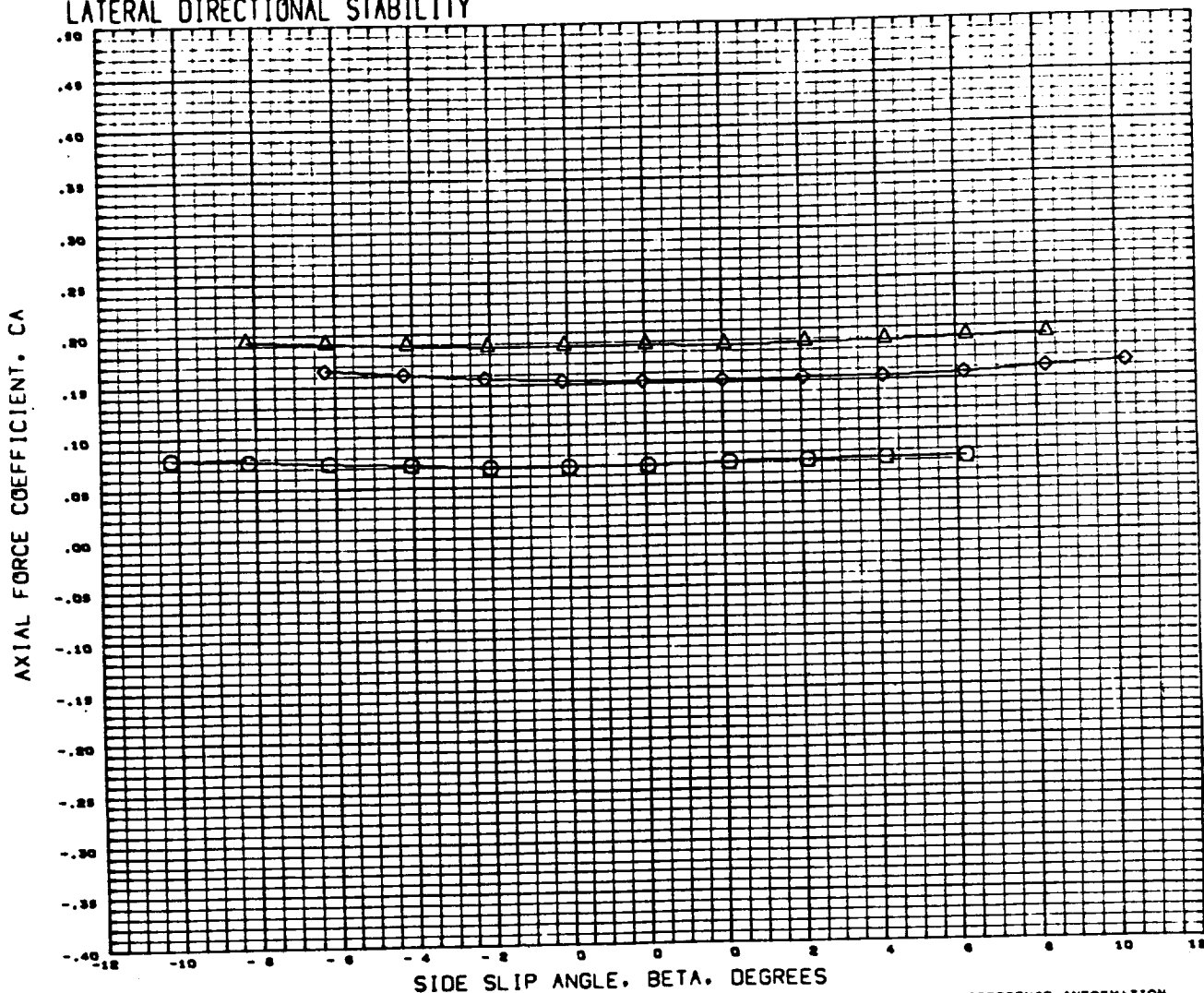
SYMBOL ○ △ ◇	MACH	PARAMETRIC VALUES			
	0.896	ALPHA	0.000	DEL	0.000
	1.200	DER	0.000	ELEVTR	0.000
	3.480	AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LRFP	1.9360	IN.
BRFP	4.3000	IN.
XRRP	2.4000	IN.
YRRP	0.0000	IN.
ZRRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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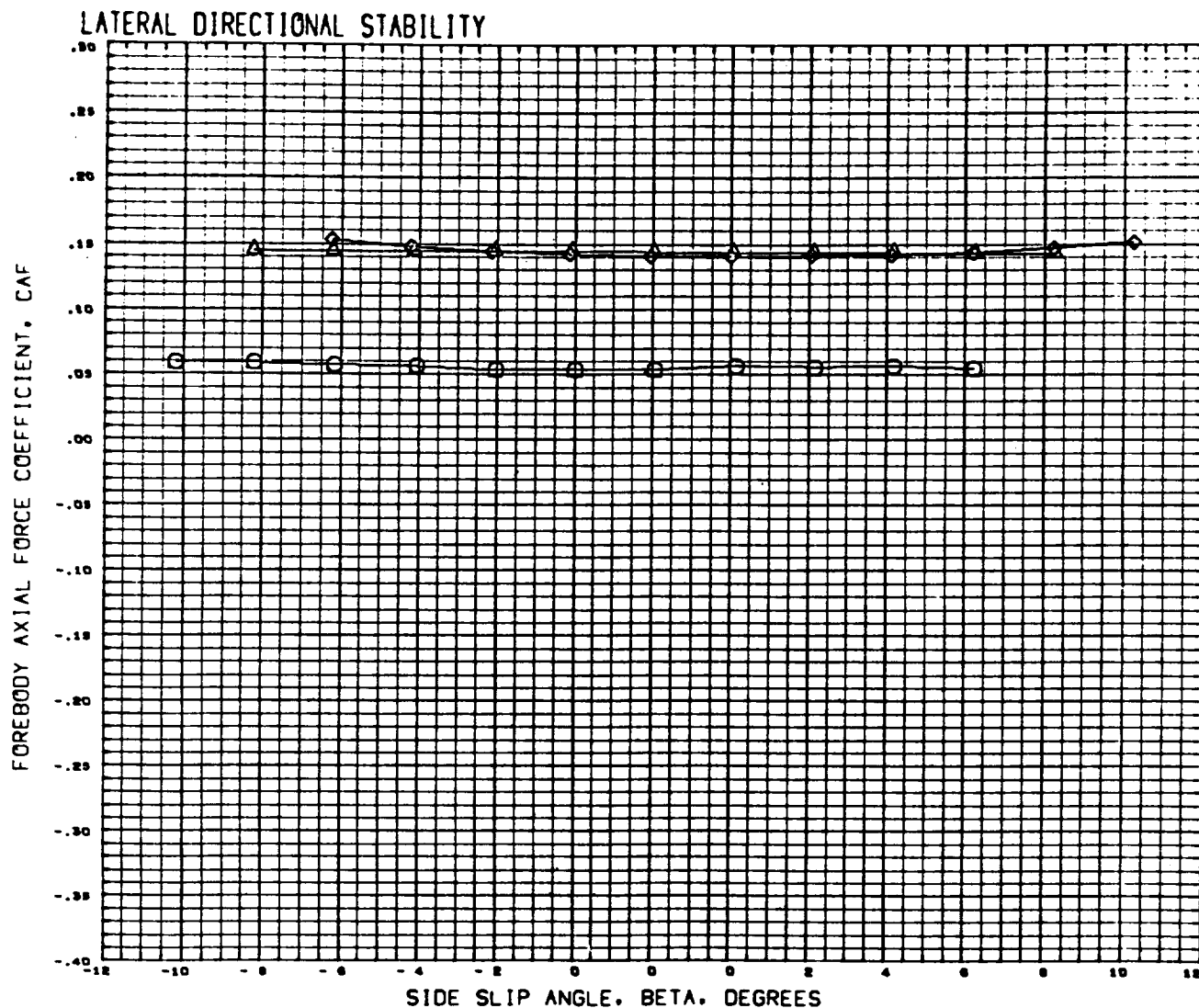
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES
○	0.896	ALPHA 0.000 DEL 0.000
△	1.200	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

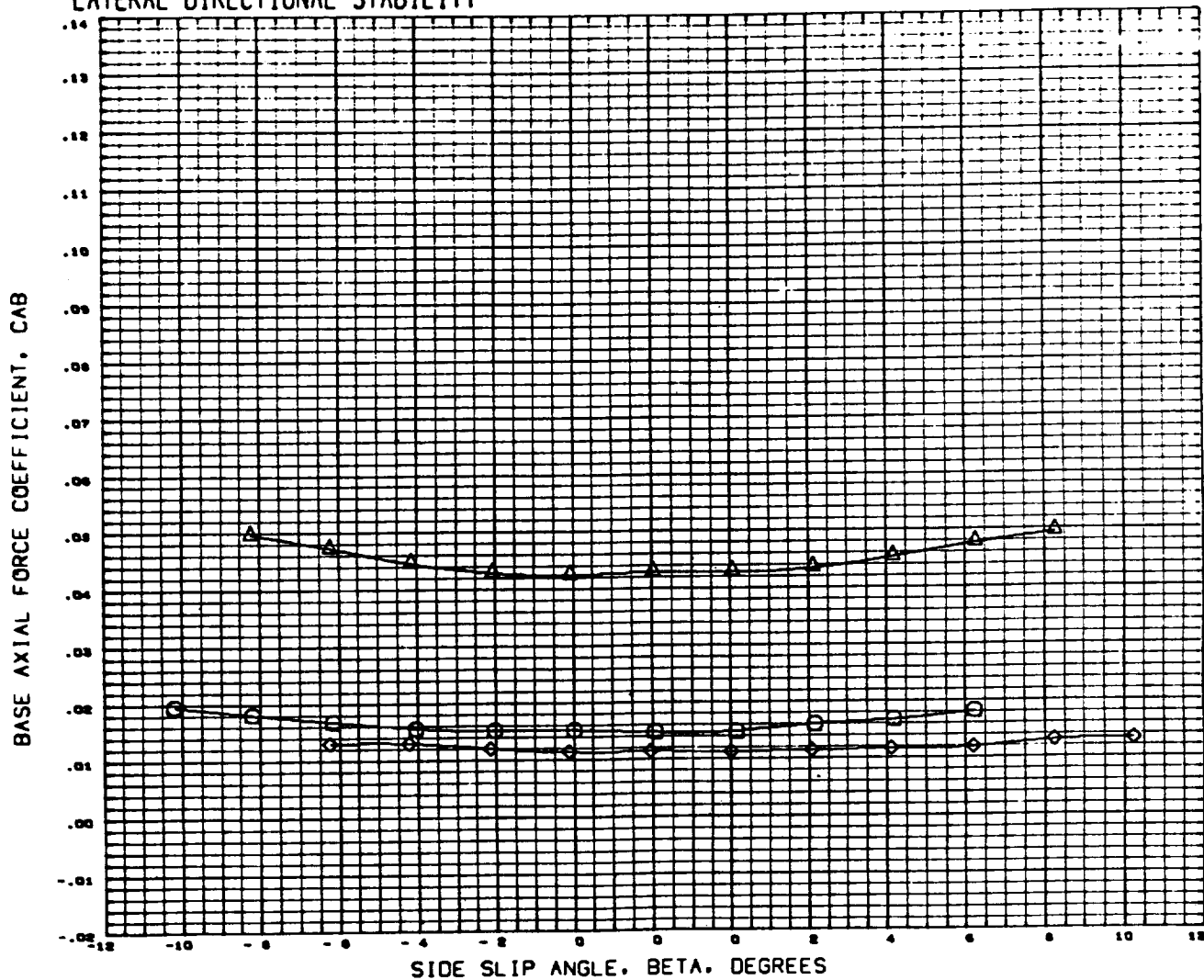
DATA HIST. CODE *E



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.896	ALPHA 0.000 DEL 0.000	BREF 4.8225 30. IN.
△	1.200	DER 0.000 ELEVTR 0.000	LREF 1.9360 IN.
◇	3.490	AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
			ZMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

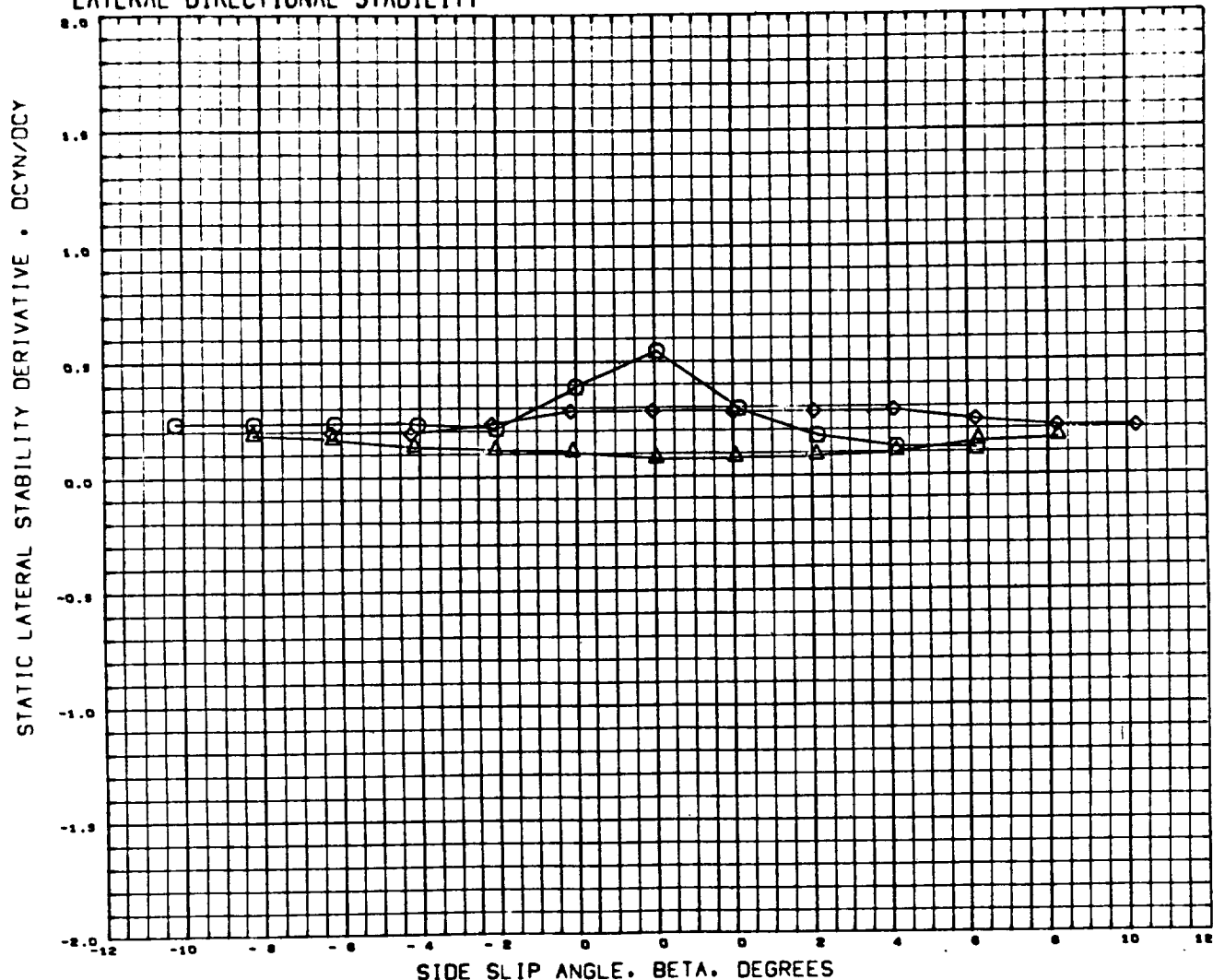
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.896	ALPHA 0.000 DEL 0.000	SREP 4.6225 SQ. IN.
△	1.200	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	3.460	AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025 IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



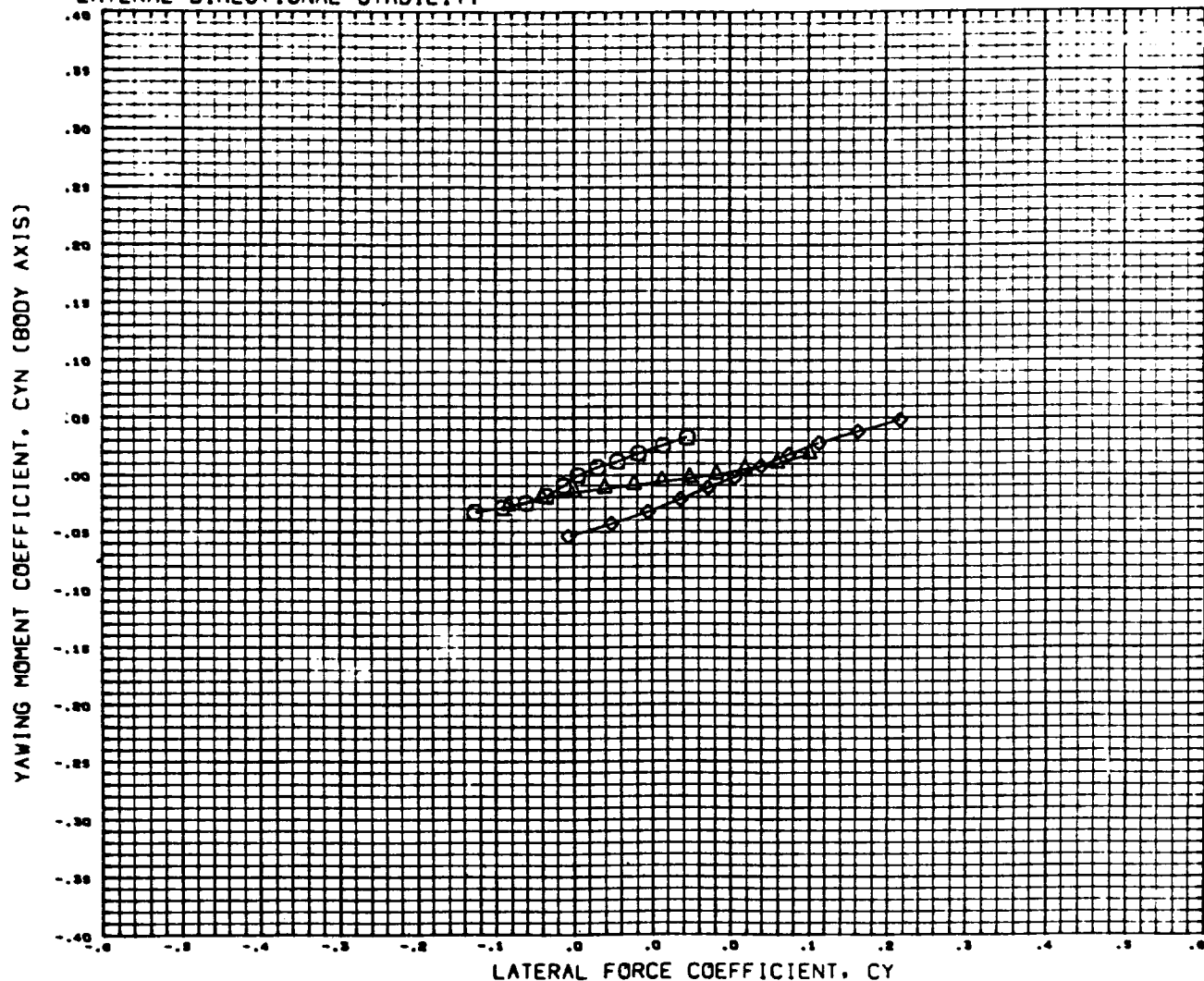
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△	1.200	0.000	CANARD	0.000	
◇	3.400	0.000			

REFERENCE INFORMATION	
BREF	4.6225 SQ. IN.
LREF	1.5360 IN.
SREF	4.3000 IN.
YNRP	2.4000 IN.
YNRP	0.0000 IN.
ZNRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

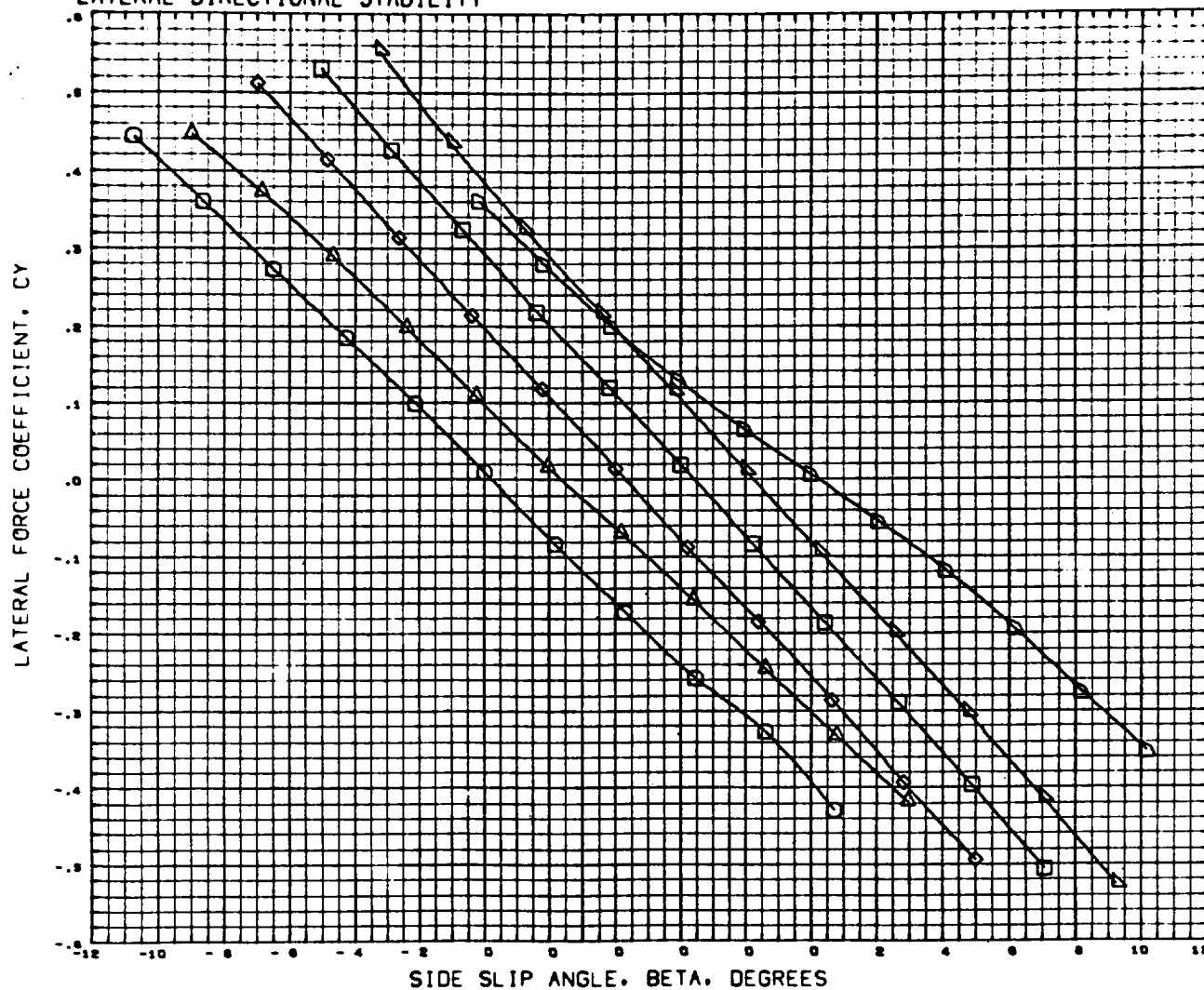


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.898	ALPHA	0.000	DEL	0.000	SREF	4.6225	83. IN.
△	1.200	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	3.480	ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						XHRP	2.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE 9E

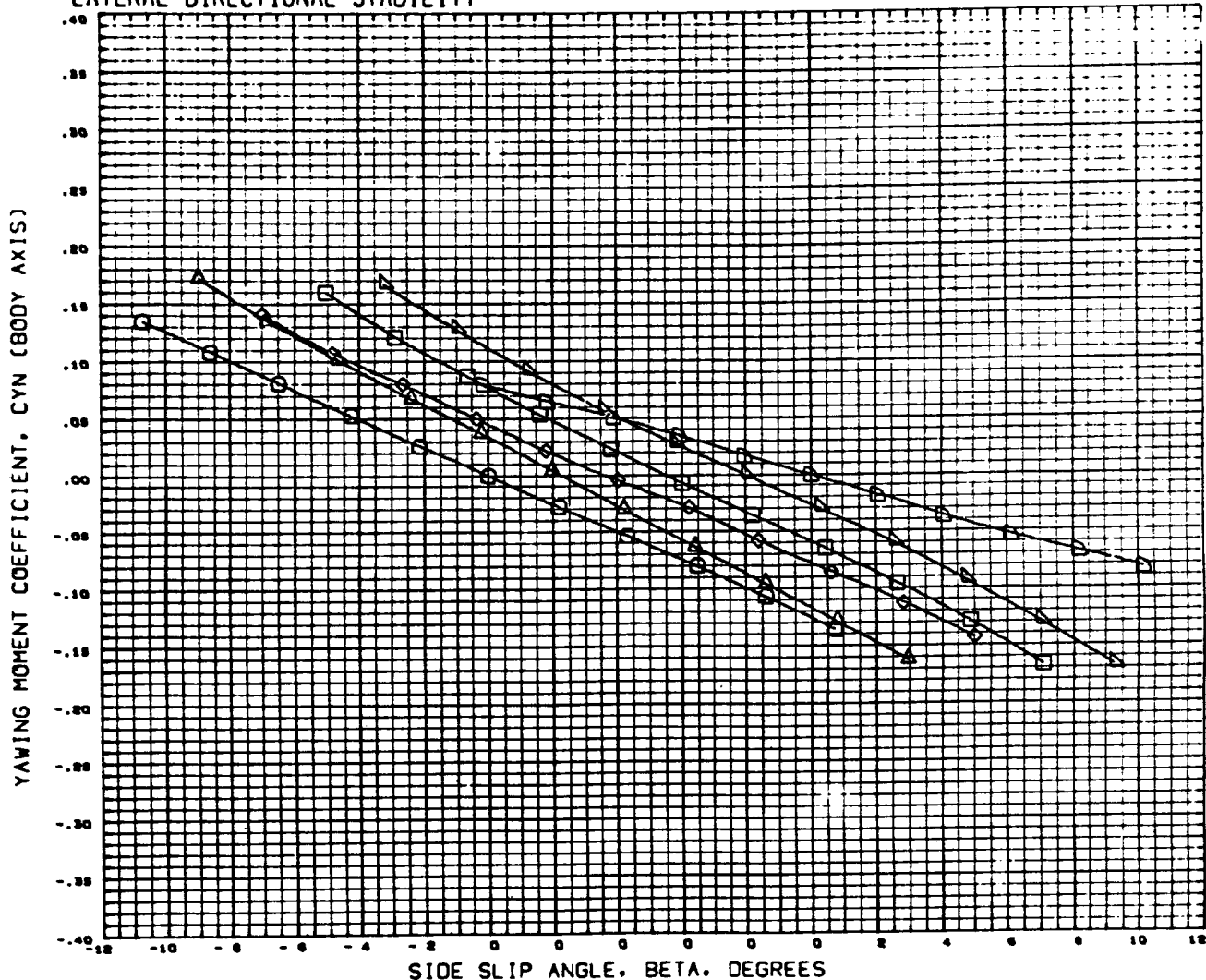
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LATERAL DIRECTIONAL STABILITY



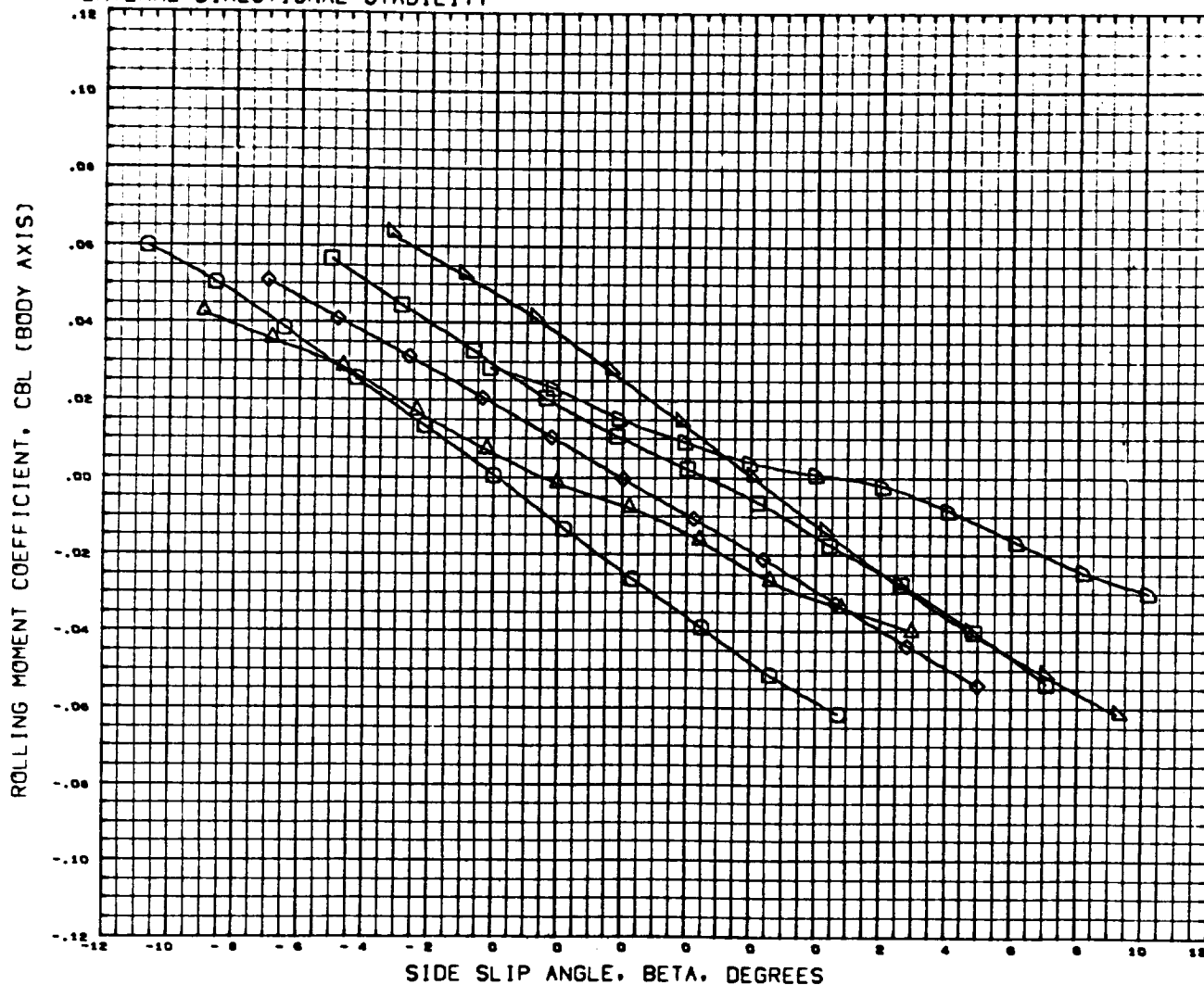
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	4.6225	80. IN.
○	0.599	0.000	0.000	0.000	0.000	LREF	1.5360	IN.
△	0.900	0.000	0.000	0.000	0.000	BREF	4.3000	IN.
□	1.002	0.000	0.000	0.000	0.000	XMRP	2.4000	IN.
◇	1.197					YMRP	0.0000	IN.
×	1.960					ZMRP	0.0000	IN.
○	4.959					SCALE	0.0025	IN.
		DATA HIST. CODE *E						

LATERAL DIRECTIONAL STABILITY



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION	
<div> <div></div> <div></div> <div></div> <div></div> <div></div> <div></div> </div>	MACH	ALPHA	DEL	0.000	0.000	SREF	4.6225 30. IN.
	0.399	DER	0.000	ELEVTR	0.000	LREF	1.5360 IN.
	0.900	AILRON	0.000	CANARD	0.000	BREF	4.3000 IN.
	1.002					XHRP	2.4000 IN.
	1.197					YHRP	0.0000 IN.
	1.960					ZHRP	0.0000 IN.
	4.959					SCALE	0.0025
		DATA HIST. CODE	*E				
M496-MSFC		AR11981-3	MODEL	W682011C12V2 (E3841F)			
				06 SEP 72			
				PAGE 120			

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.599	ALPHA	0.000	DEL	0.000	SREF	4.6225 80. IN.
◇	0.900	DER	0.000	ELEVTR	0.000	LREF	1.5160 IN.
□	1.002	ATLRON	0.000	CANARD	0.000	BREF	4.3000 IN.
△	1.197					YNRP	2.4000 IN.
▽	1.960					YNRP	0.0000 IN.
◇	4.999					YNRP	0.0000 IN.
		DATA HIST. CODE	*E			SCALE	0.0025

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AR11981-3

MODEL

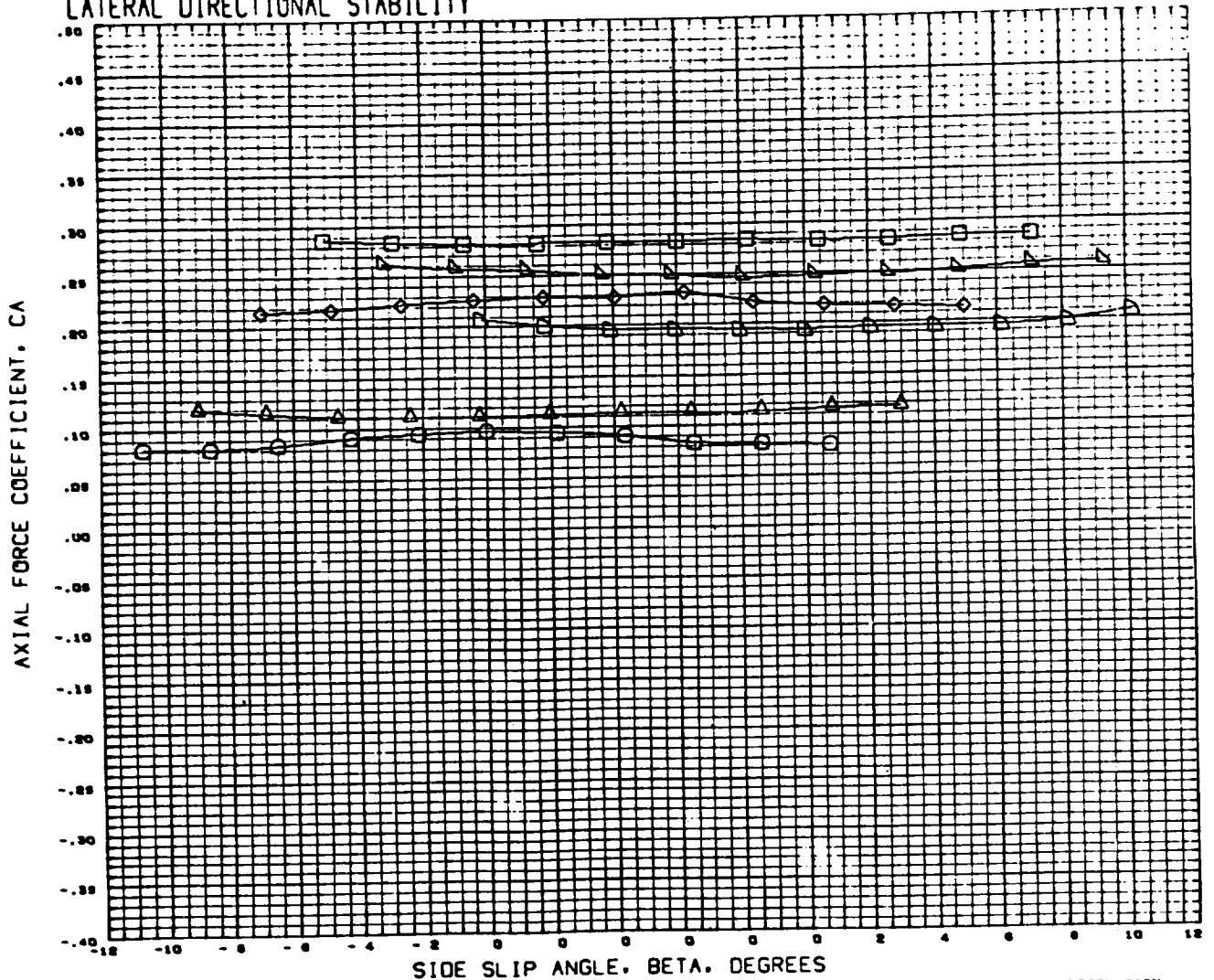
W6B2011C12V2 (E3841F)

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PAGE

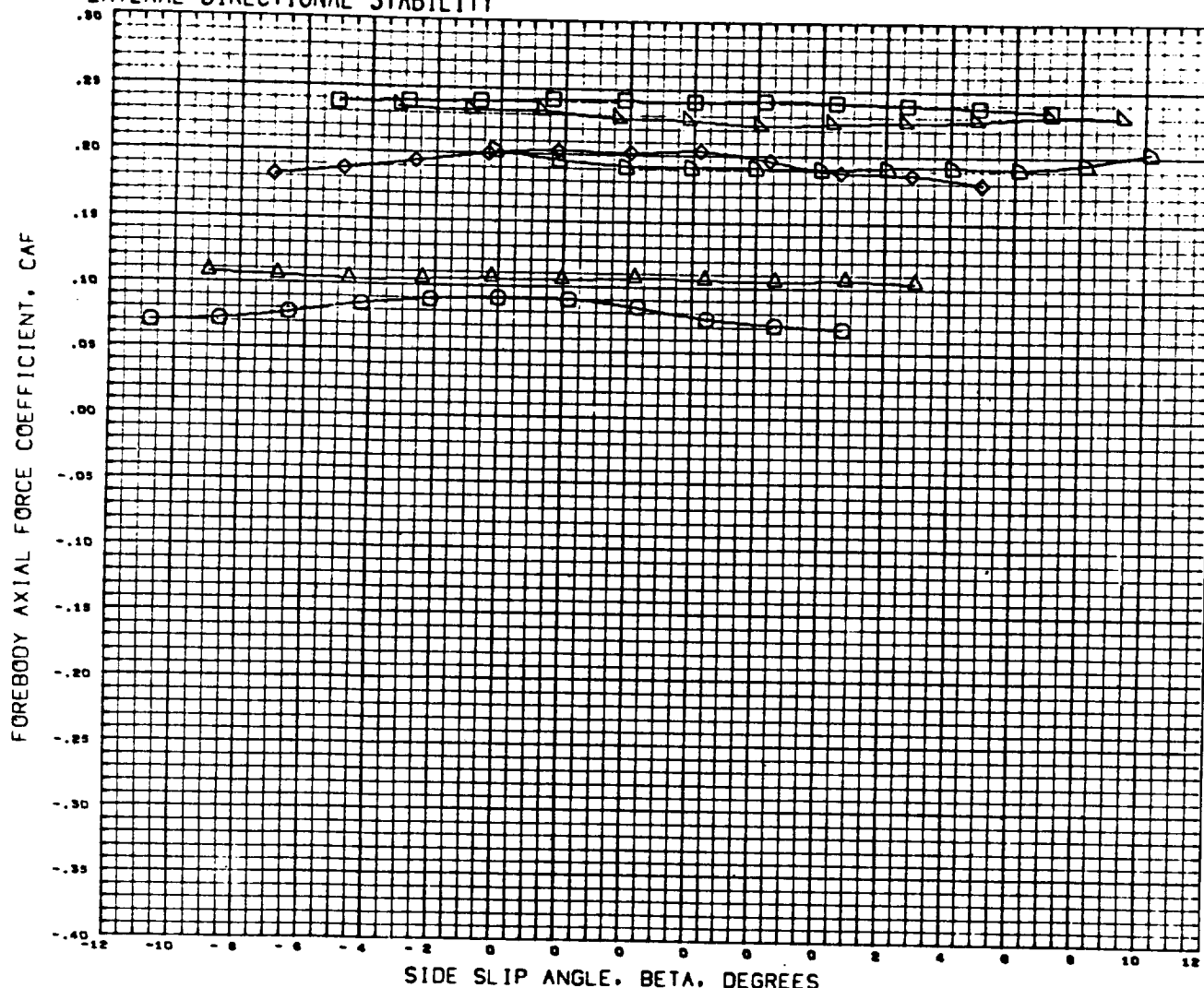
121

LATERAL DIRECTIONAL STABILITY



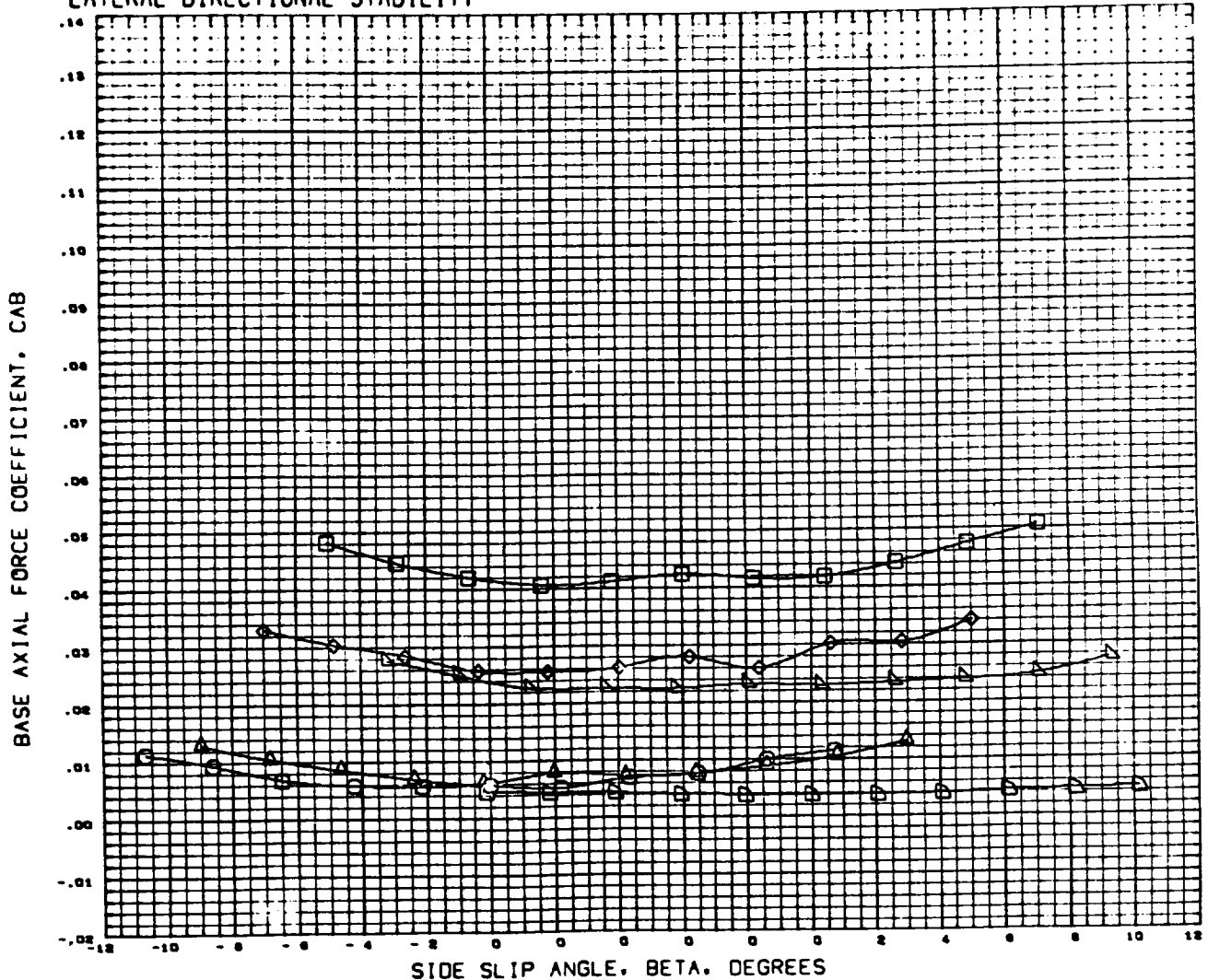
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□	0.900	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
△	1.002	AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
◇	1.197		XMRP 2.4000 IN.
◇	1.960		YMRP 0.0000 IN.
◇	4.959		ZMRP 0.0000 IN.
		DATA HIST. CODE *E	SCALE 0.0025
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			PAGE 122

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	0.999	ALPHA	0.000	DEL	0.000	BREF	4.6225	50. IN.
◇	0.900	DER	0.000	ELEVTR	0.000	LREF	1.3560	IN.
△	1.002	AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
○	1.197					ZMRP	2.4000	IN.
	1.960					YMRP	0.0000	IN.
	4.959	DATA MIST. CODE	*E			ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
□	0.999	0.000	0.000	0.000	0.000	4.6225	1.3360	4.3000
◇	0.900	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
△	1.002	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0025
○	1.197							
×	1.980							
+	4.939							
		DATA HIST. CODE	#E					

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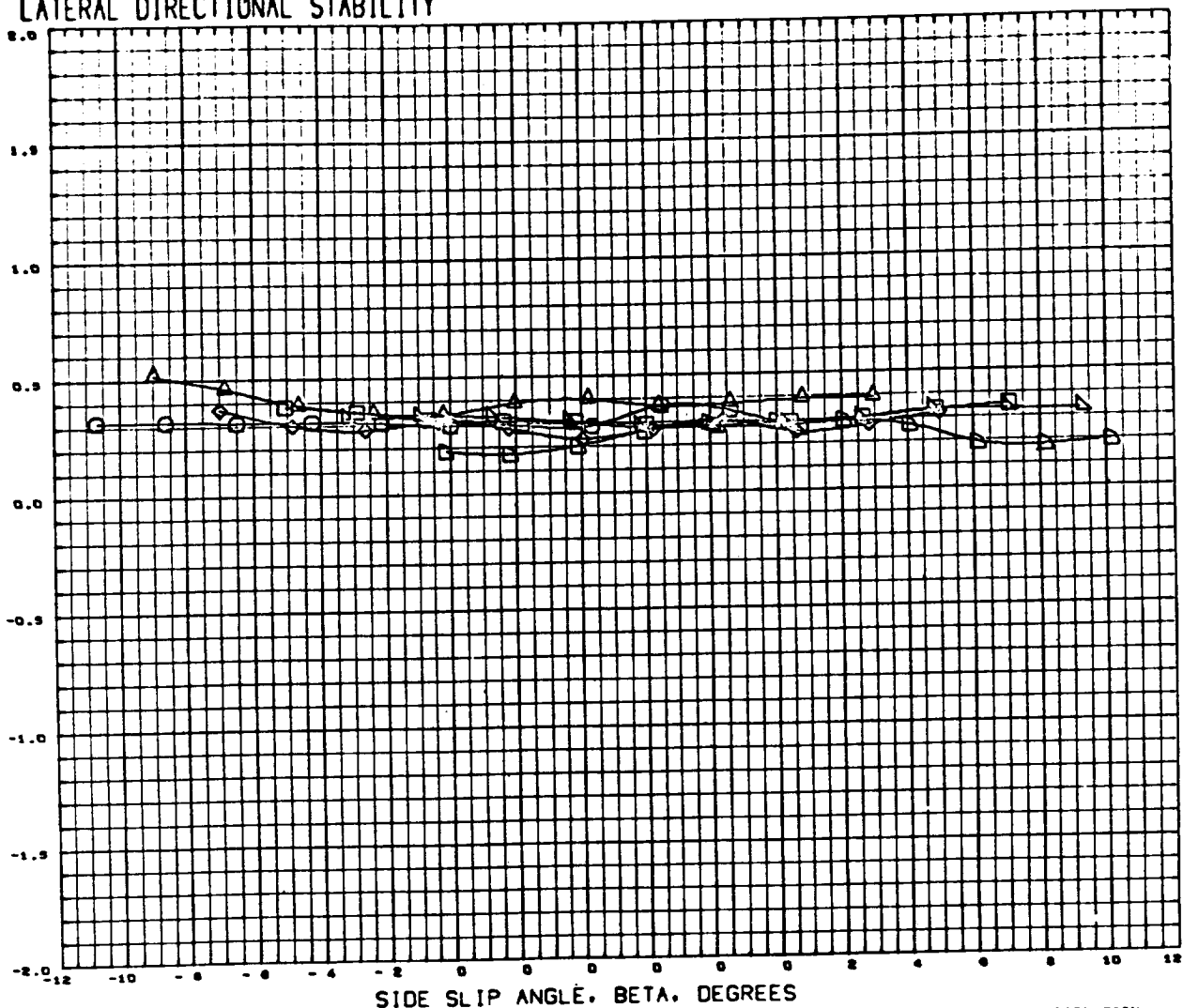
MODEL

W682011C12V2 (E3841F) 06 SEP 72

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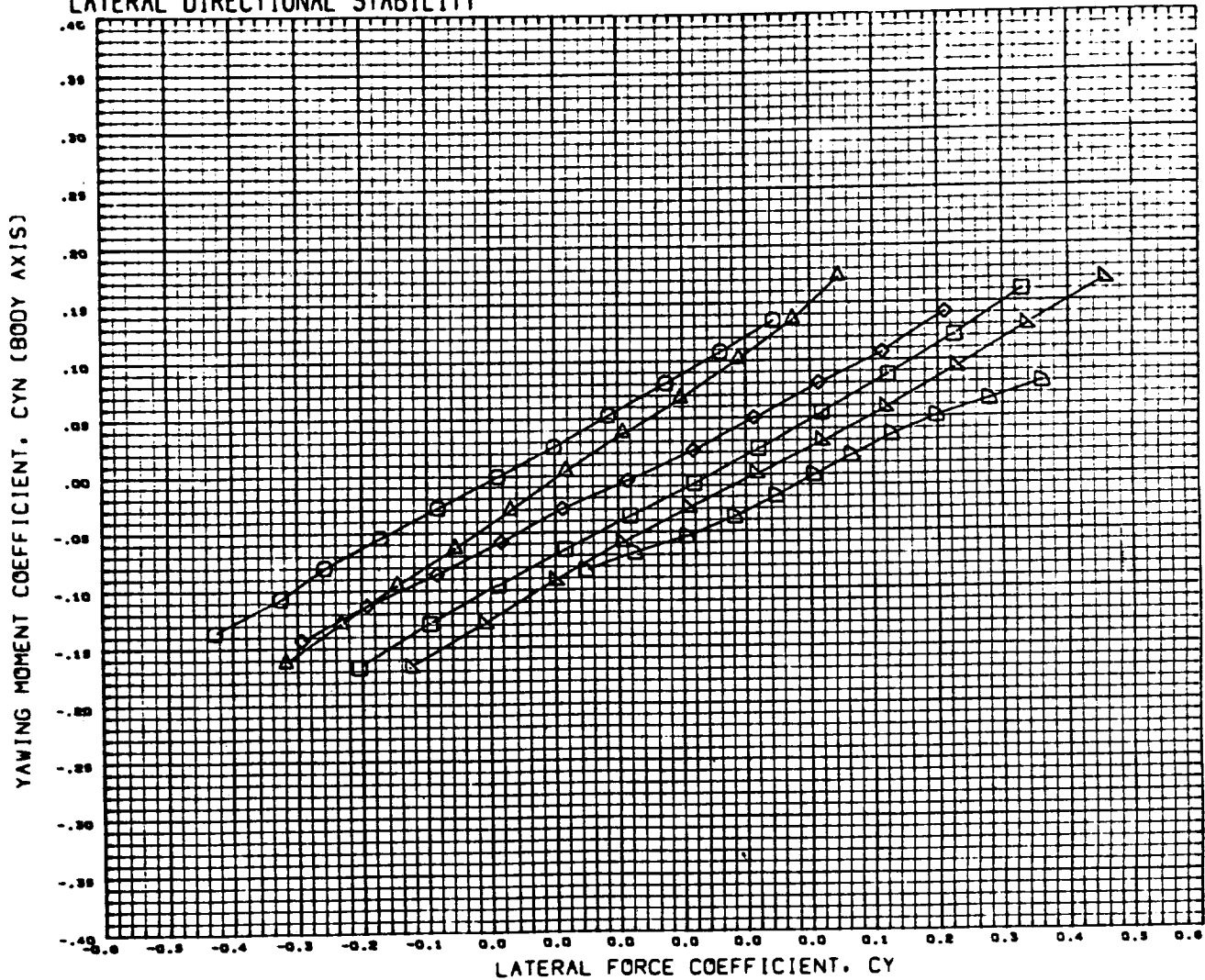
LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



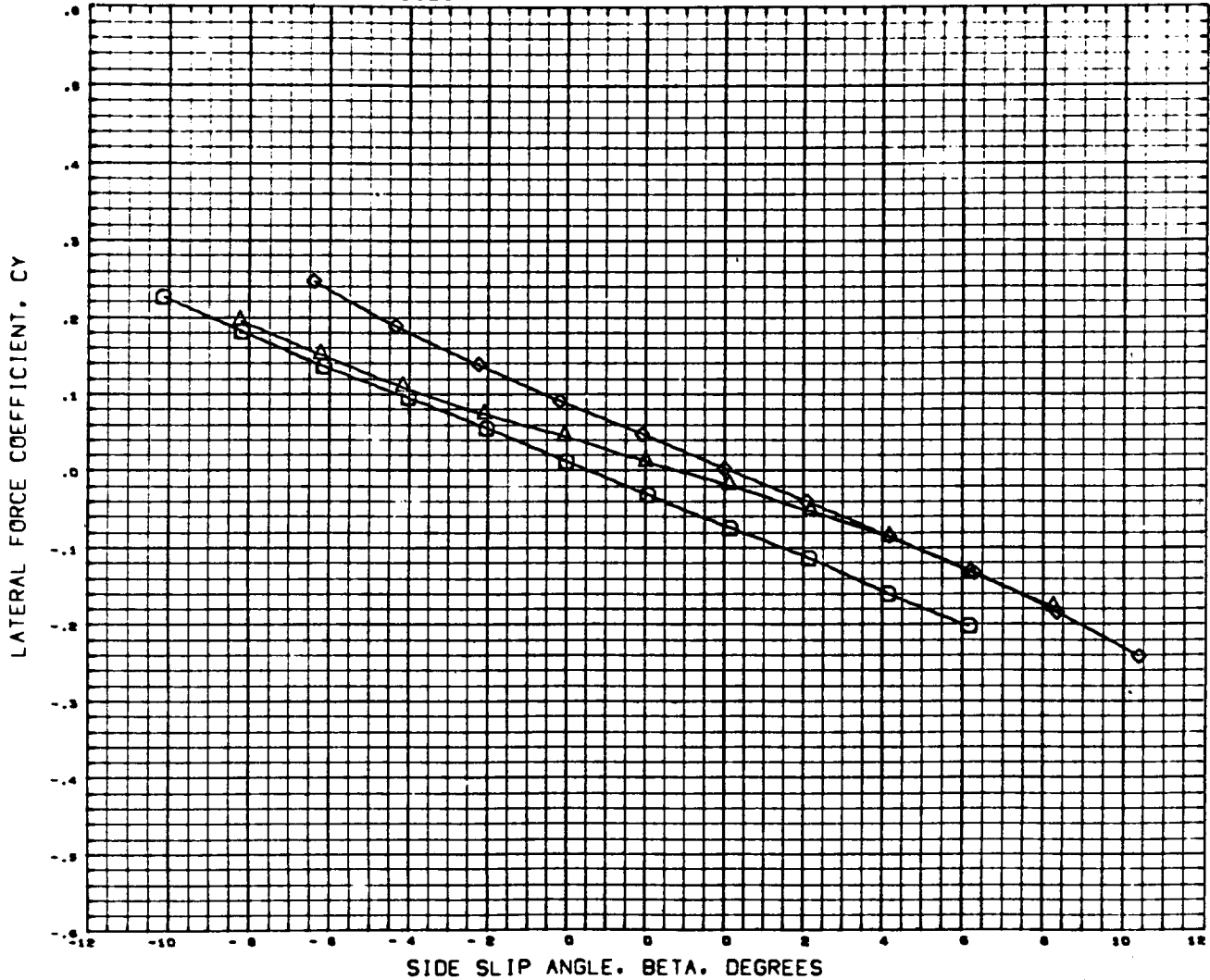
SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
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◊	1.002	ATLRON	0.000	CANARD	0.000		BRP	4.3000	IN.
◈	1.197						XMRP	2.4000	IN.
◉	1.960						YMRP	0.0000	IN.
◊	4.959	DATA HIST. CODE	*E				ZMRP	0.0000	IN.
							SCALE	0.0025	
M496-MSFC AR11981-3 MODEL W6B2011C12V2 (E3841F) 06 SEP 72 PAGE 125									

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	SG, IN.
□	0.599	0.000	0.000	0.000	0.000	4.6225	1.5360	IN.
◇	0.900	0.000	0.000	0.000	0.000	4.3000	2.4000	IN.
△	1.002	0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
▽	1.197	0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
○	1.960	0.000	0.000	0.000	0.000	0.0025		
×	4.959	0.000	0.000	0.000	0.000			
DATA HIST. CODE	*E							

LATERAL DIRECTIONAL STABILITY

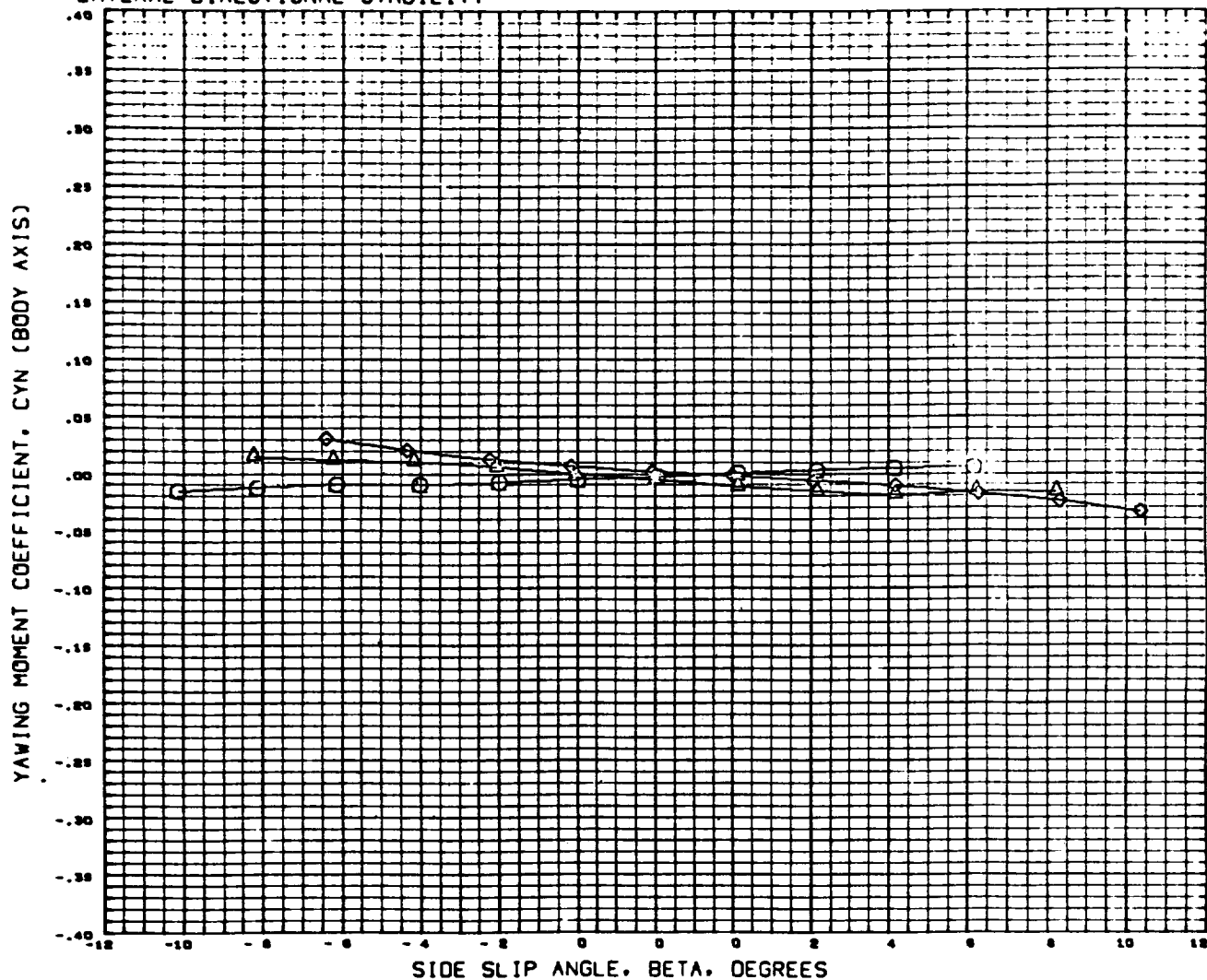


SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	ALPHA	0.000	DEL	0.000
△	0.900	DER	0.000	ELEVTR	0.000
◇	1.961	AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
BREF	4.6225	SQ. IN.
LREF	1.5360	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

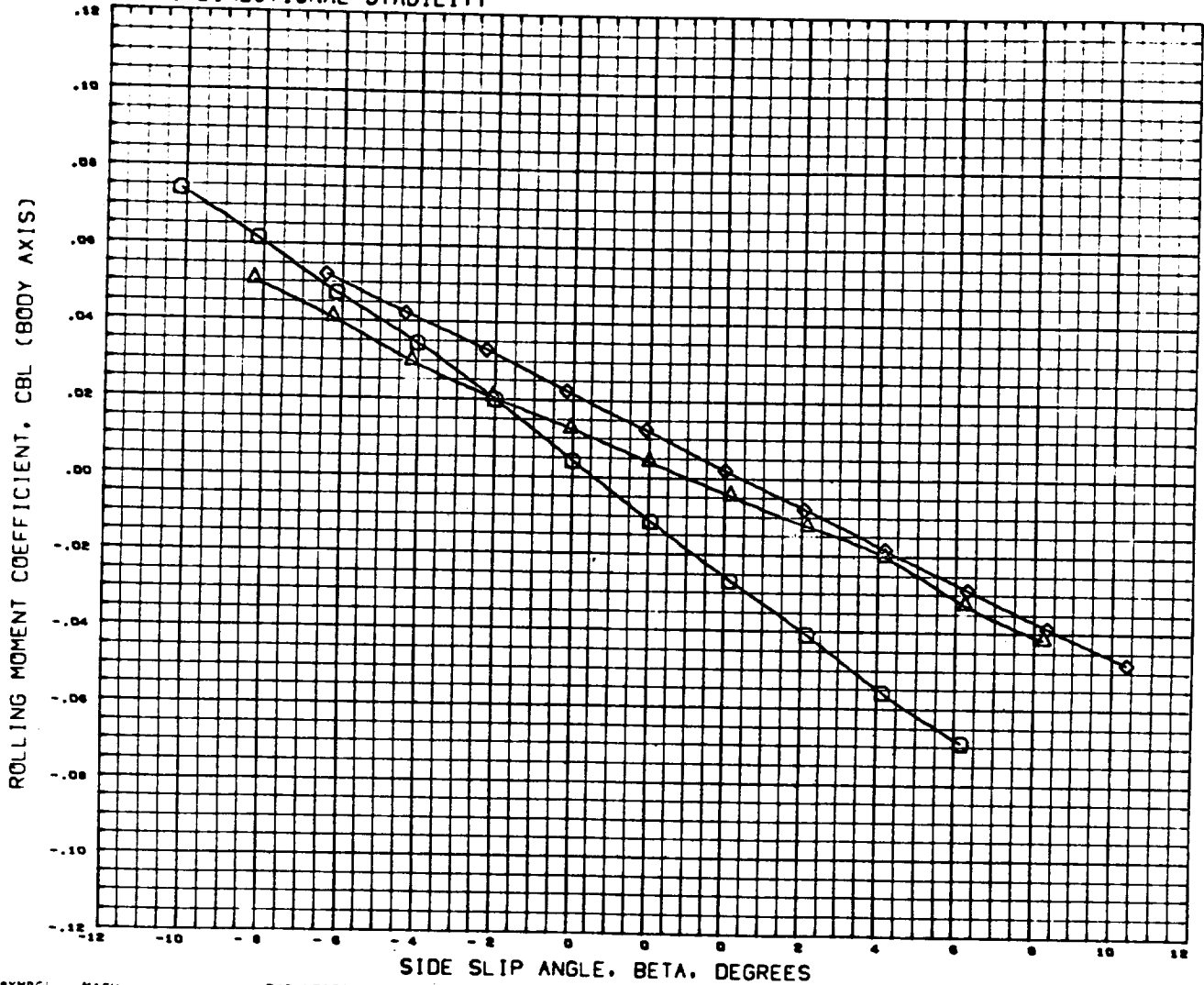


SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.599	ALPHA 0.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	0.900	DER 0.000 ELEVTR 0.000	LREF 1.9360 IN.
◇	1.961	AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

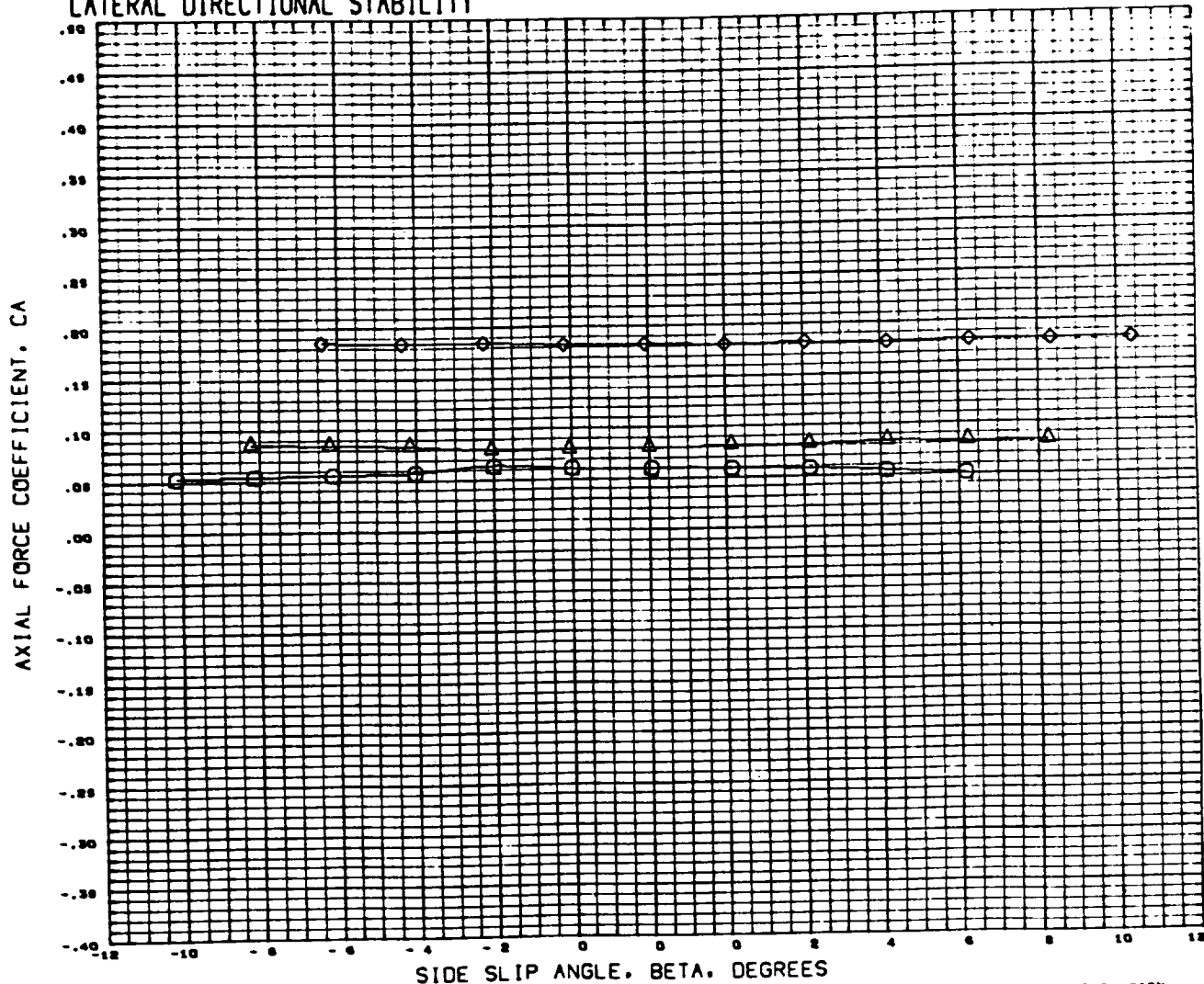


SYMBOL	MACH	PARAMETRIC VALUES			
○	0.999	ALPHA	0.000	DEL	0.000
△	0.900	DER	0.000	ELEVTR	0.000
◇	1.961	ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
BREP	4.6225	sq. in.
LREP	1.8360	in.
BREP	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



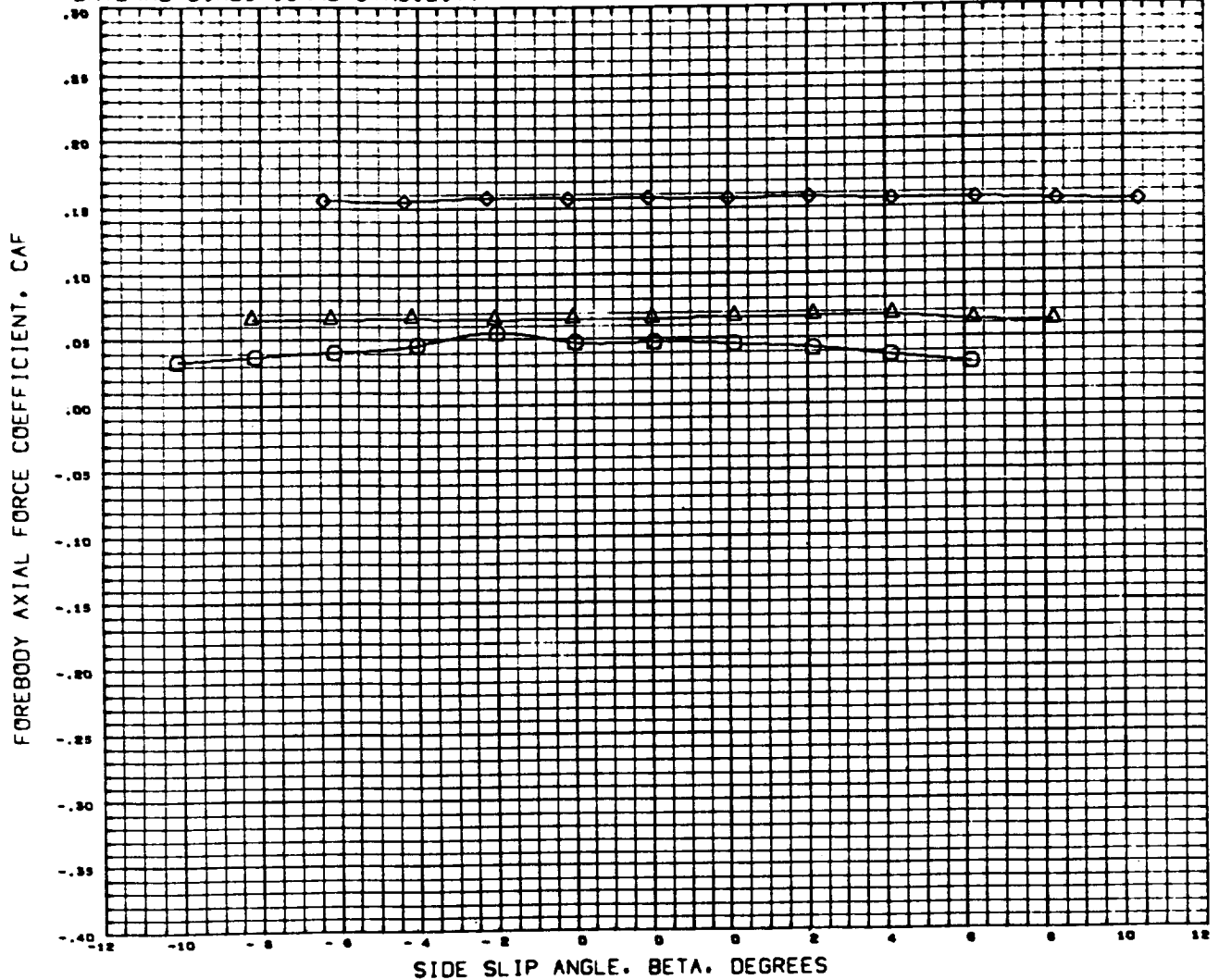
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△	0.900	DER 0.000 ELEVTR 0.000
◇	1.001	AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
SREP	4.6225	50. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	ALPHA	0.000	DEL	0.000
△	0.900	DER	0.000	ELEVTR	0.000
◇	1.981	AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SRF	4.6225	50. IN.
LREF	1.5560	IN.
SRF	4.3000	IN.
YNRP	2.4000	IN.
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YNRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

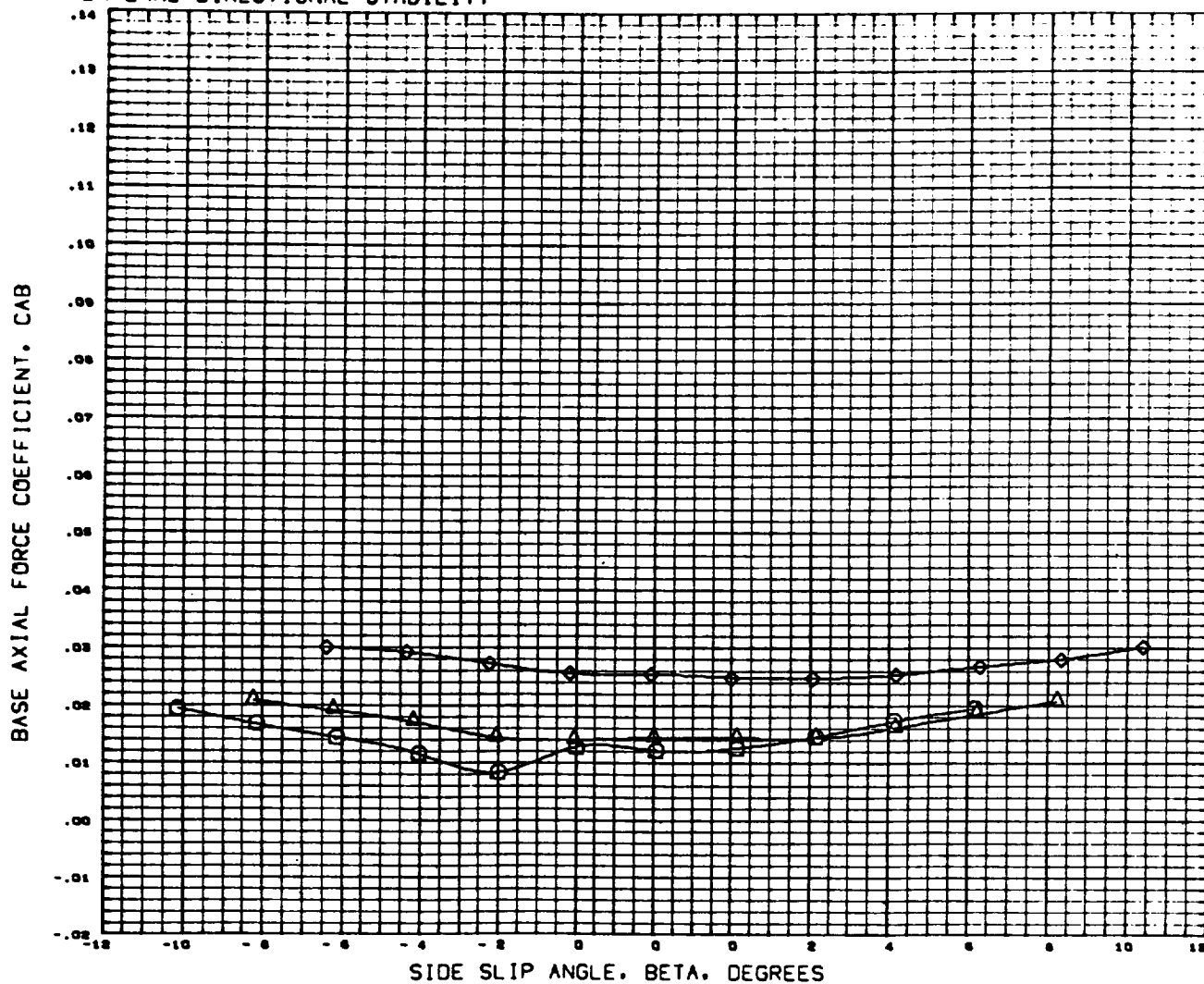
MODEL

W6HB2C12V2

(E3837F) 06 SEP 72

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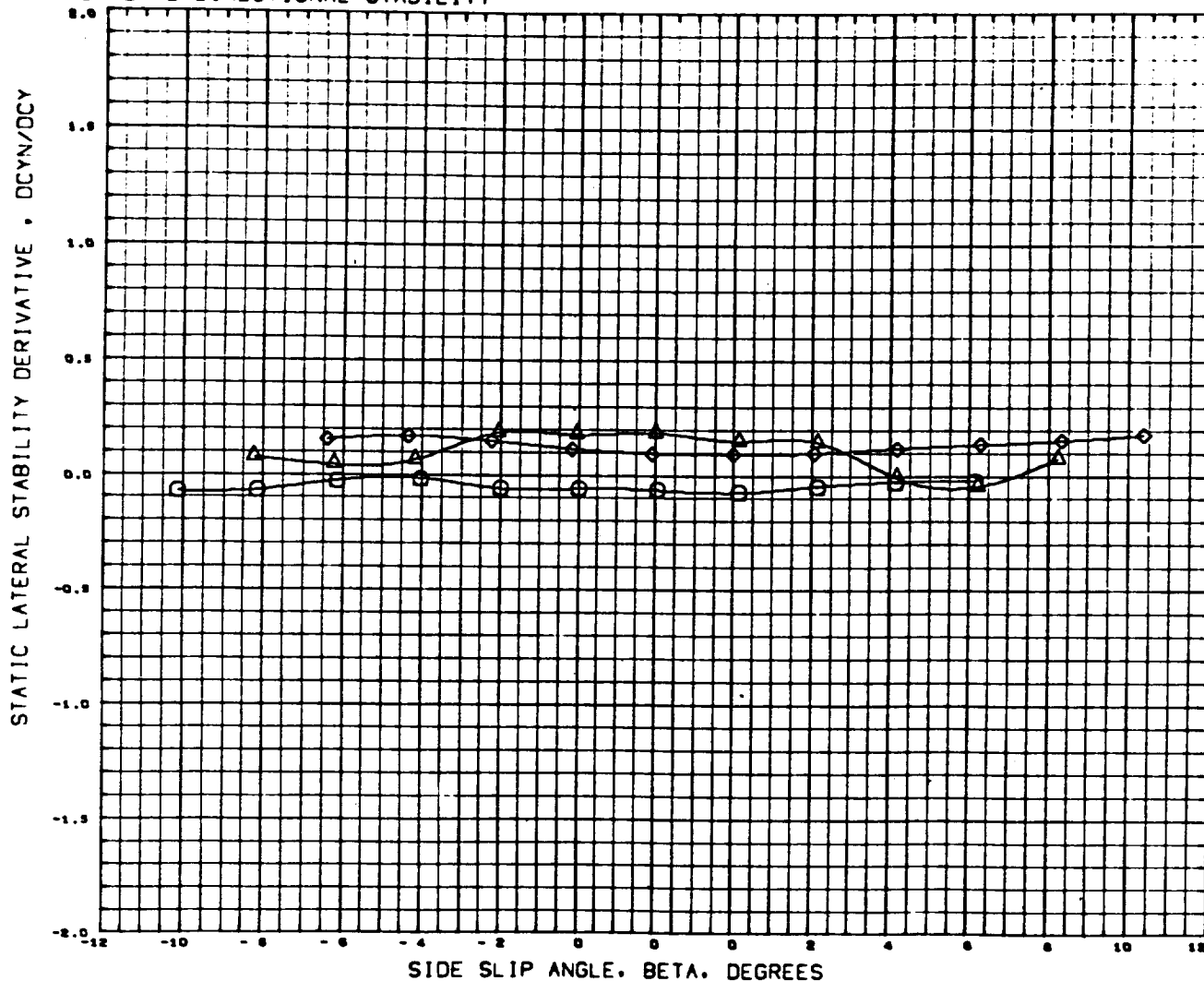
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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△	0.900	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	1.961	ATLROM	0.000	CANARD	0.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E
M496-MSFC AR1198I-3 MODEL W6HB2C12V2 (E3837F) 06 SEP 72 PAGE 132

LATERAL DIRECTIONAL STABILITY

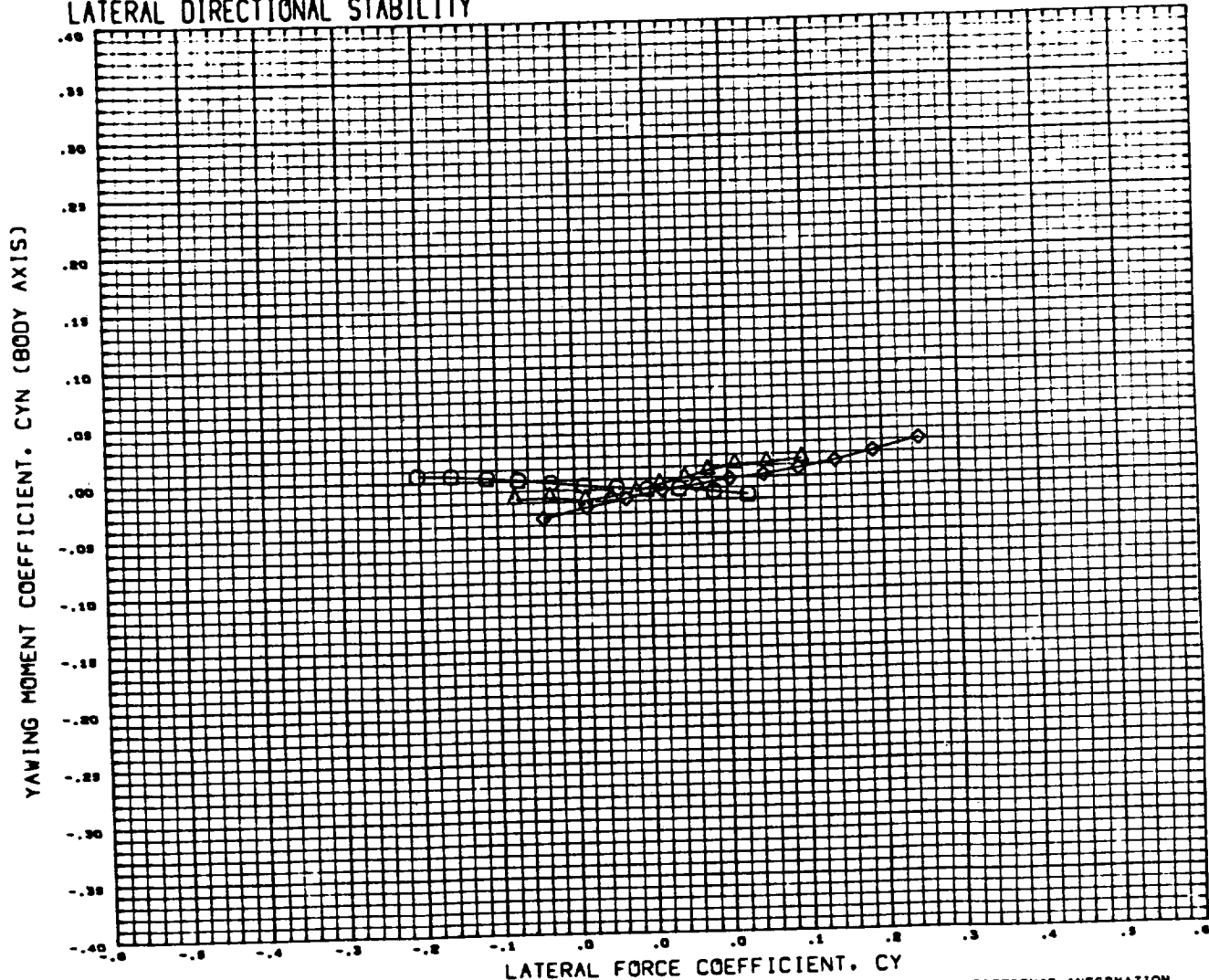


SYMBOL	MACH	ALPHA	PARAMETRIC VALUES		
○	0.999	0.000	DEL	0.000	
△	0.900	0.000	ELEVTR	0.000	
◇	1.061	0.000	CANARD	0.000	

REFERENCE INFORMATION		
SREF	4.6225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
ZMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES
○	0.599	ALPHA 0.000 DEL 0.000
△	0.900	DER 0.000 ELEVTR 0.000
◇	1.961	AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
SREP	4.6225	SQ. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W6HB2C12V2

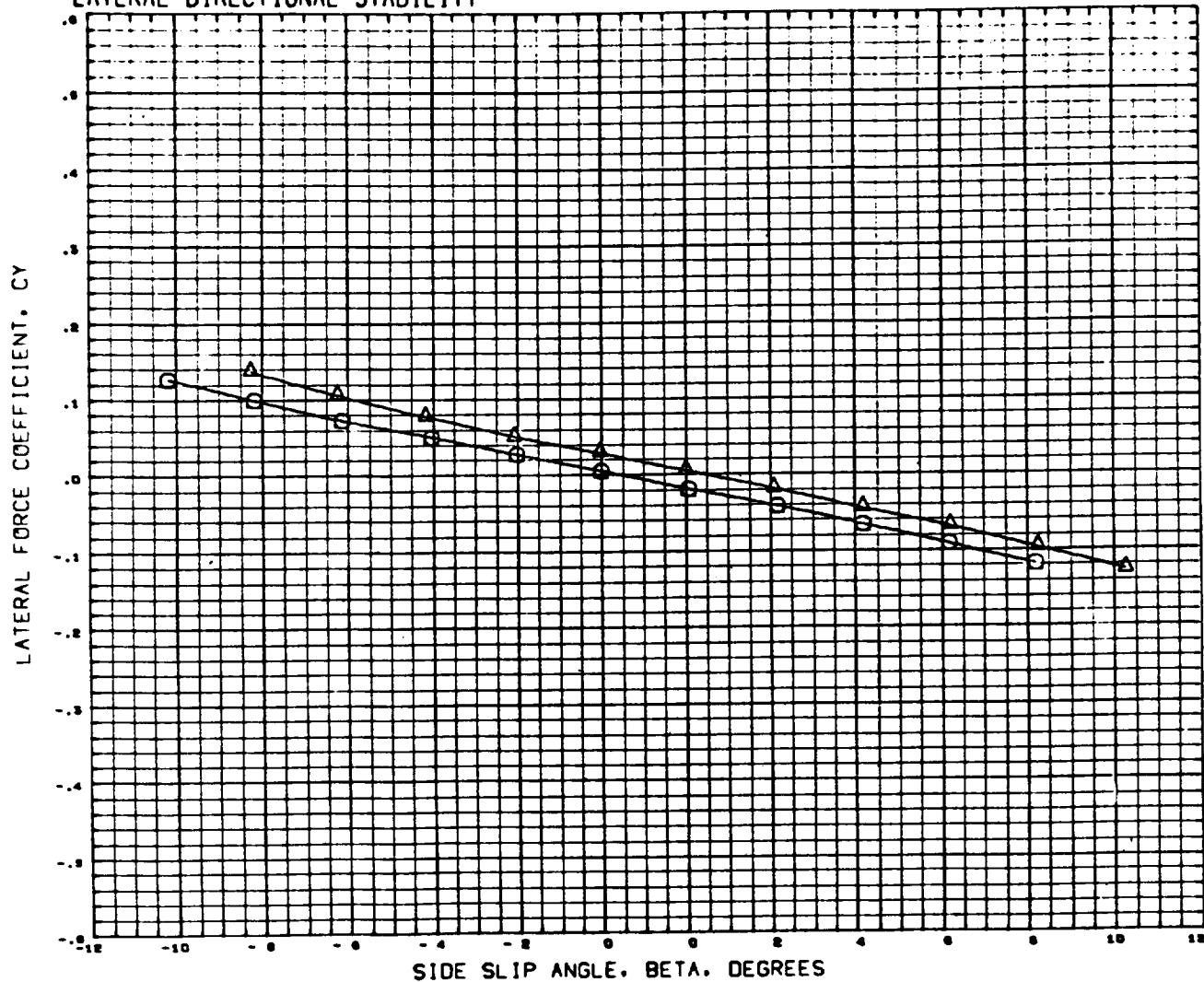
(E3837F)

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.998	0.999	ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	SC. IN.
○			0.000	0.000	0.000	0.000	4.6225	1.5360	IN.
△			0.000	0.000	0.000	0.000	4.3000	2.4000	IN.
			0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
			0.000	0.000	0.000	0.000	0.0000	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR11981-3

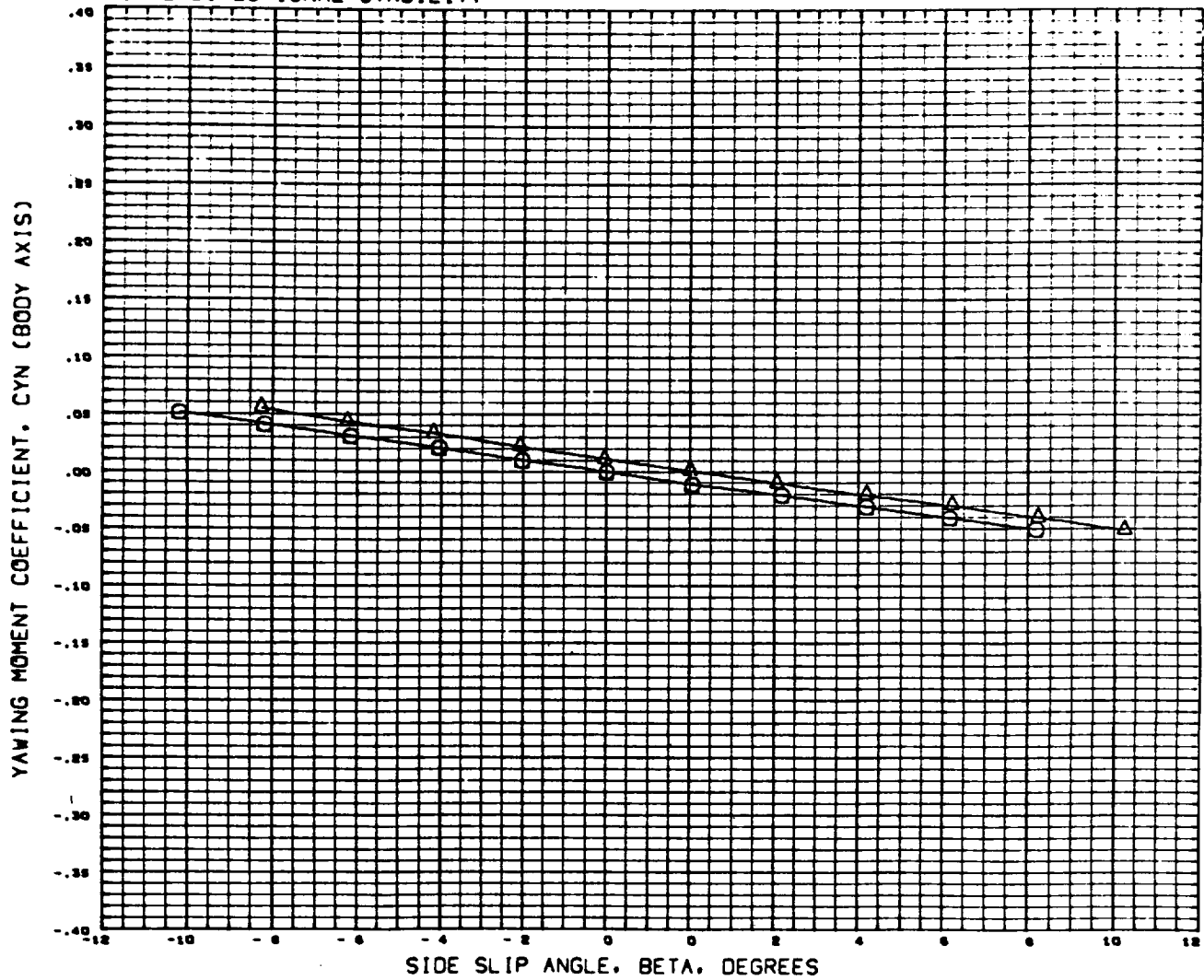
MODEL

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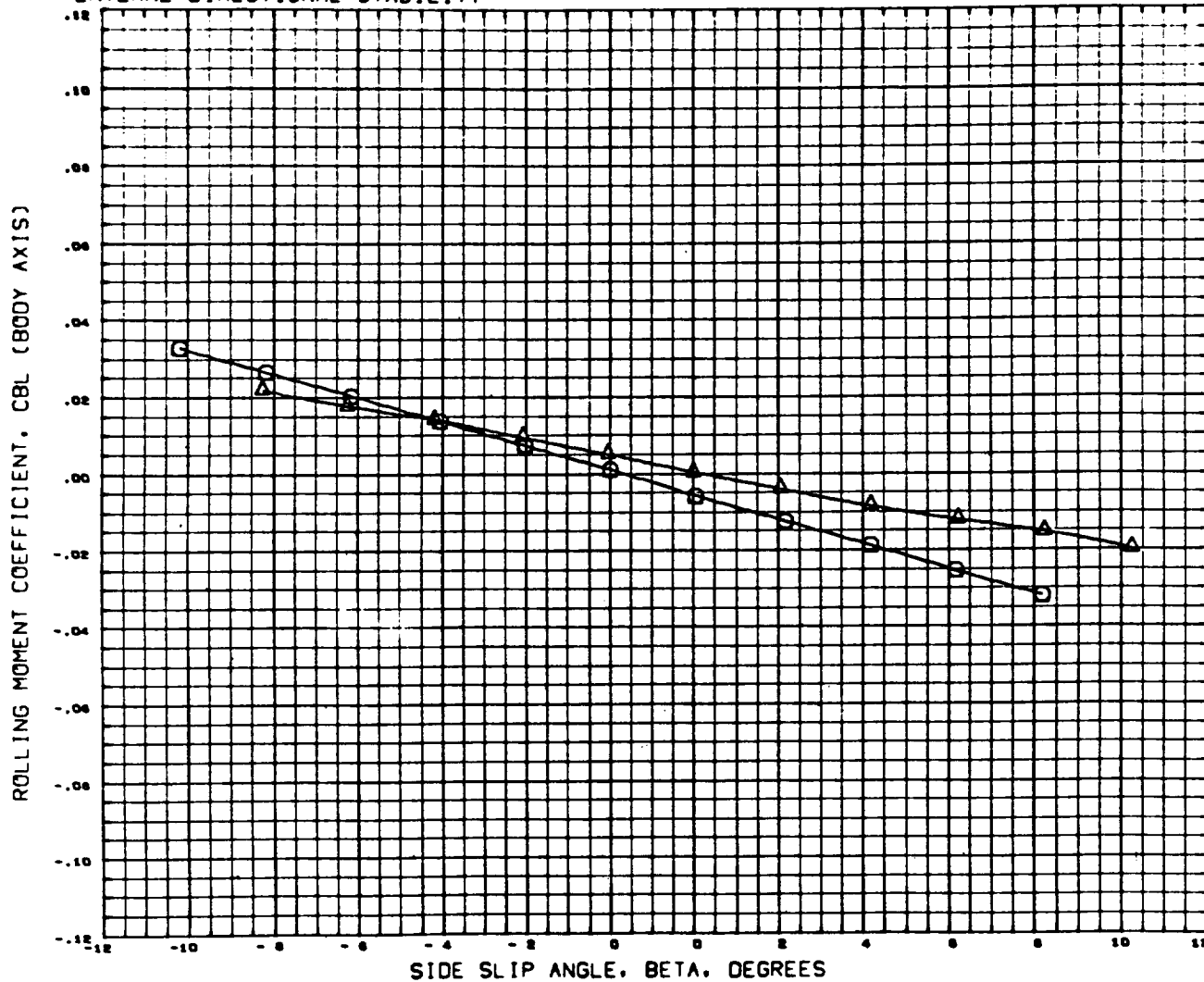
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.598	0.999	ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○			0.000	0.000	0.000	0.000	4.6225	1.5360	4.3000
△			0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
			ATLRON				ZMRP	0.0000	0.0025

DATA HIST. CODE 0E

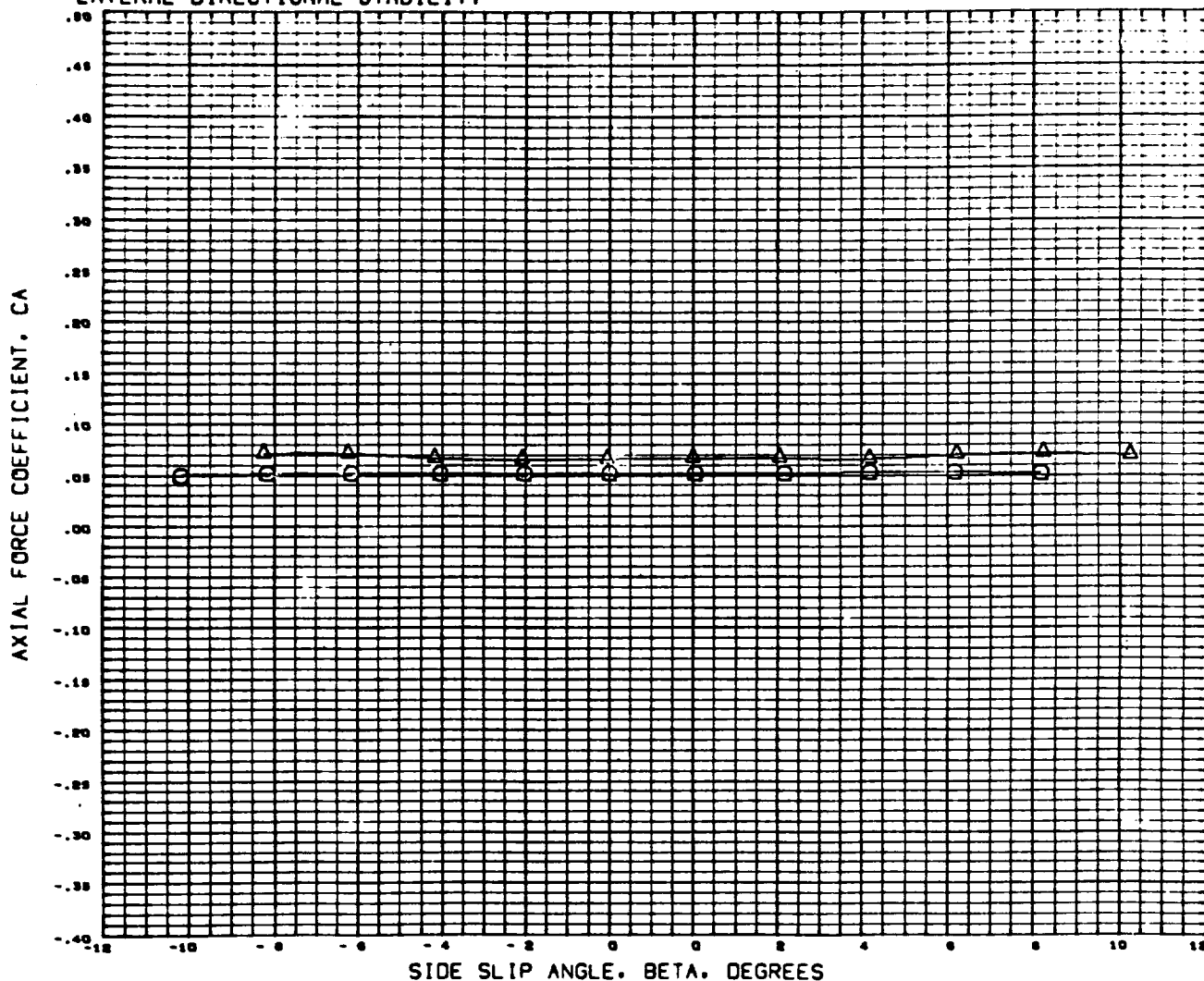
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	BREF	LRFP	SCAL
○	0.998	0.000	0.000	0.000	0.000	4.6225	1.3360	80.1M.
Δ	0.999	0.000	0.000	0.000	0.000	4.3000	1.3360	1M.
□		0.000	0.000	0.000	0.000	2.4000	1.3360	1M.
		0.000	0.000	0.000	0.000	0.0000	1.3360	1M.
		0.000	0.000	0.000	0.000	0.0000	1.3360	1M.
		0.000	0.000	0.000	0.000	0.0025	1.3360	1M.

DATA MIST. CODE 0E

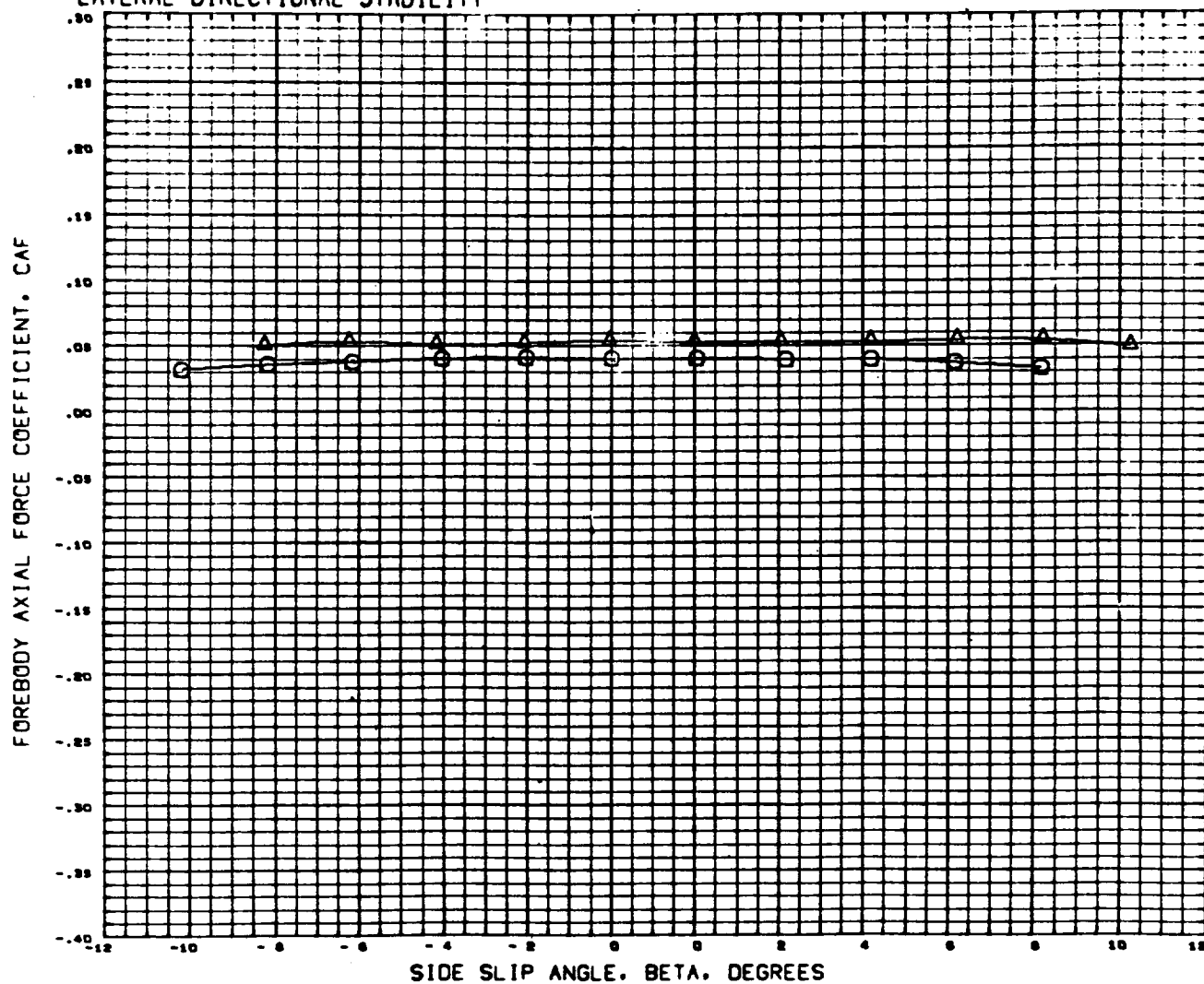
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.598	0.699	ALPHA	0.000	DEL	0.000	SREP	4.6225	33. IN.
			DER	0.000	ELEVTR	0.000	LRP	1.5360	IN.
			AILRON	0.000	CANARD	0.000	BRP	4.3000	IN.
							YMRP	2.4000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

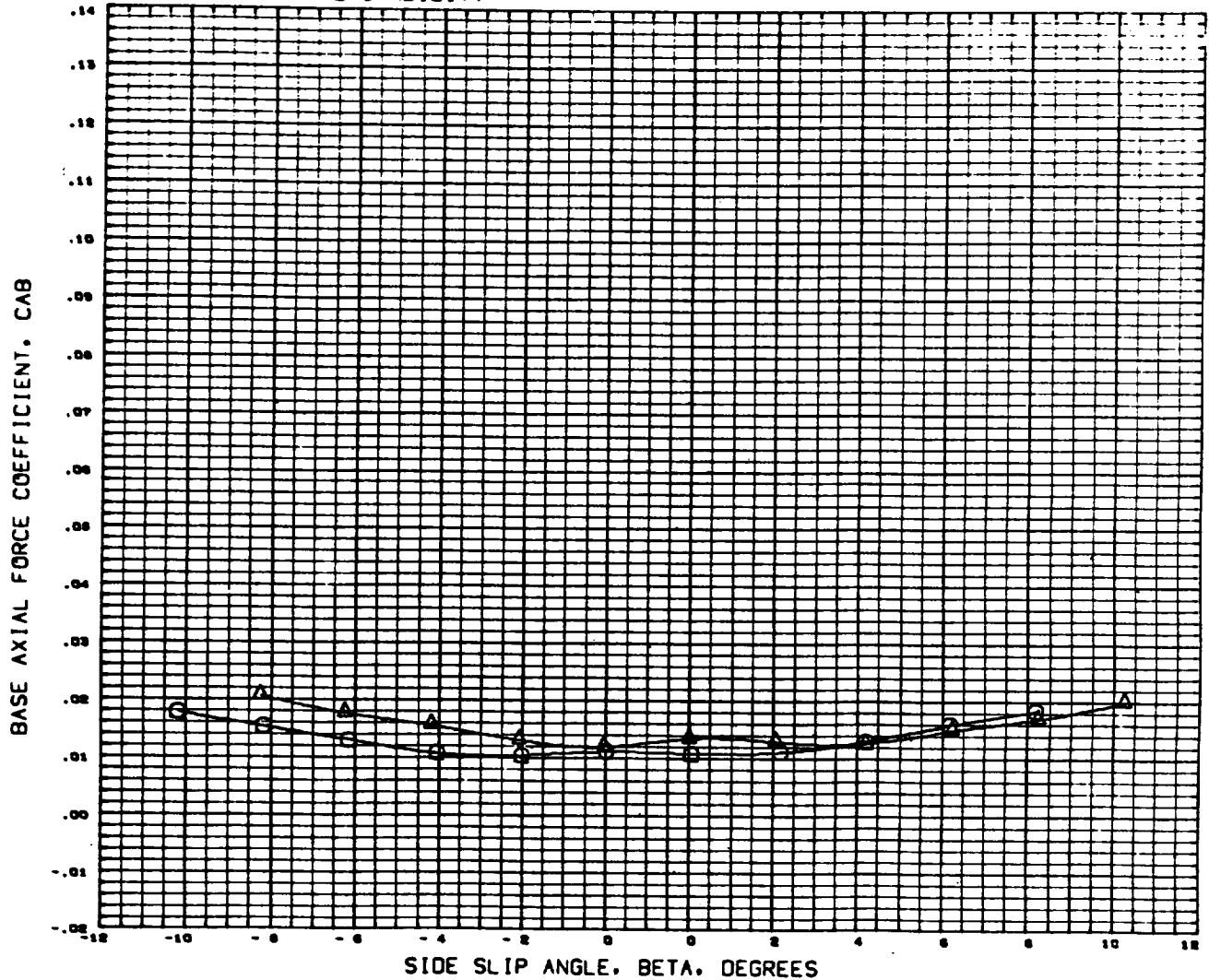
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.998	0.999	ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	0.998	0.999	0.000	0.000	0.000	0.000	4.6225	1.5360	4.3000
△	0.998	0.999	0.000	0.000	0.000	0.000	4.6225	1.5360	4.3000
			AILRON				2.4000	0.0000	0.0000
							0.0000	0.0000	0.0025
							SCALE		

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.998	ALPHA	0.000	DEL	0.000		SREF	4.6225	SQ. IN.
Δ	0.999	DER	0.000	ELEVTR	0.000		LREF	1.5360	IN.
		AILRON	0.000	CANARD	0.000		BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



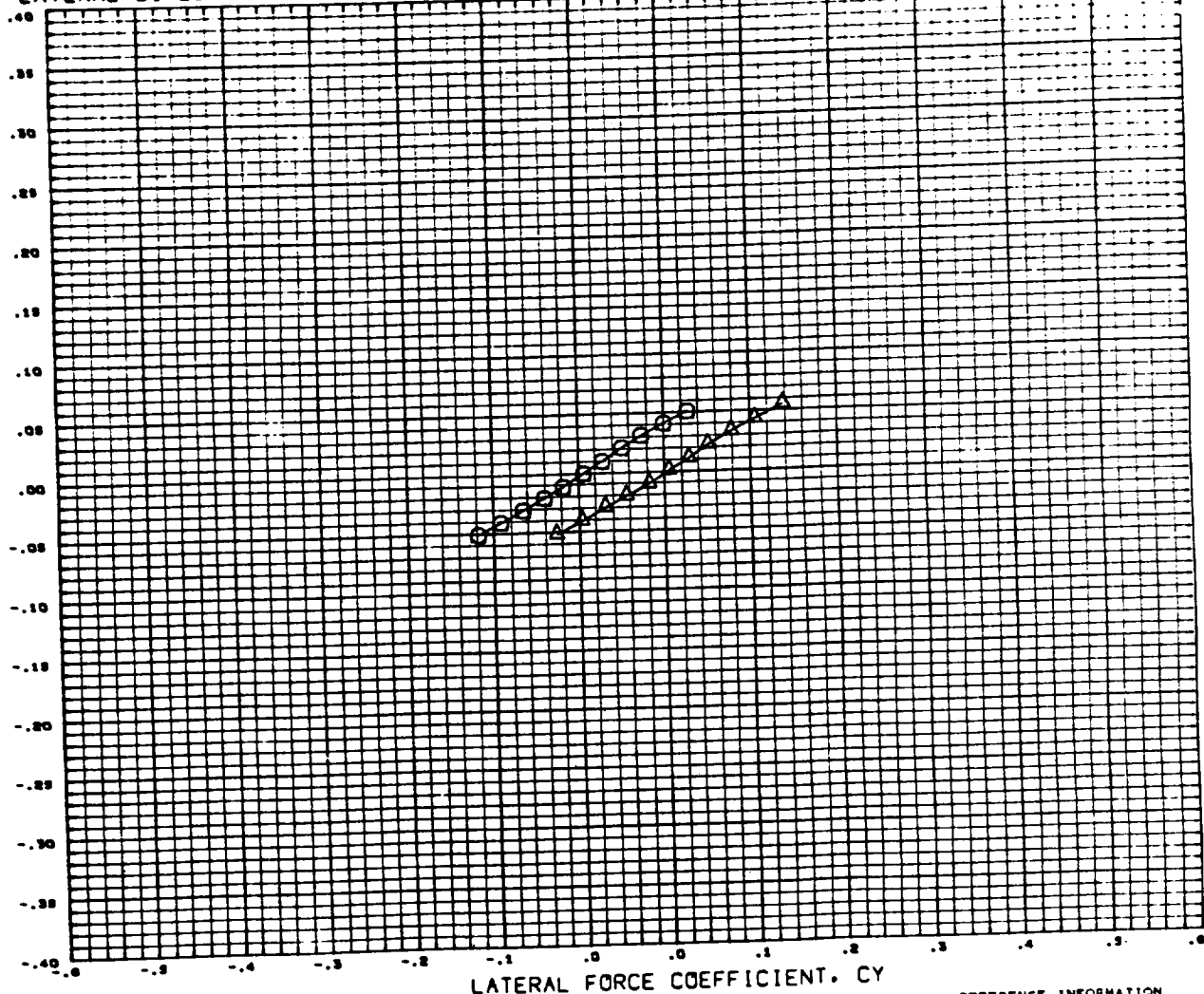
SYMBOL 	MACH	PARAMETRIC VALUES			
	0.996	ALPHA	0.000	DEL	0.000
	0.999	DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
BREF	4.8225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	0.998	ALPHA	0.000	DEL	0.000
	0.999	DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

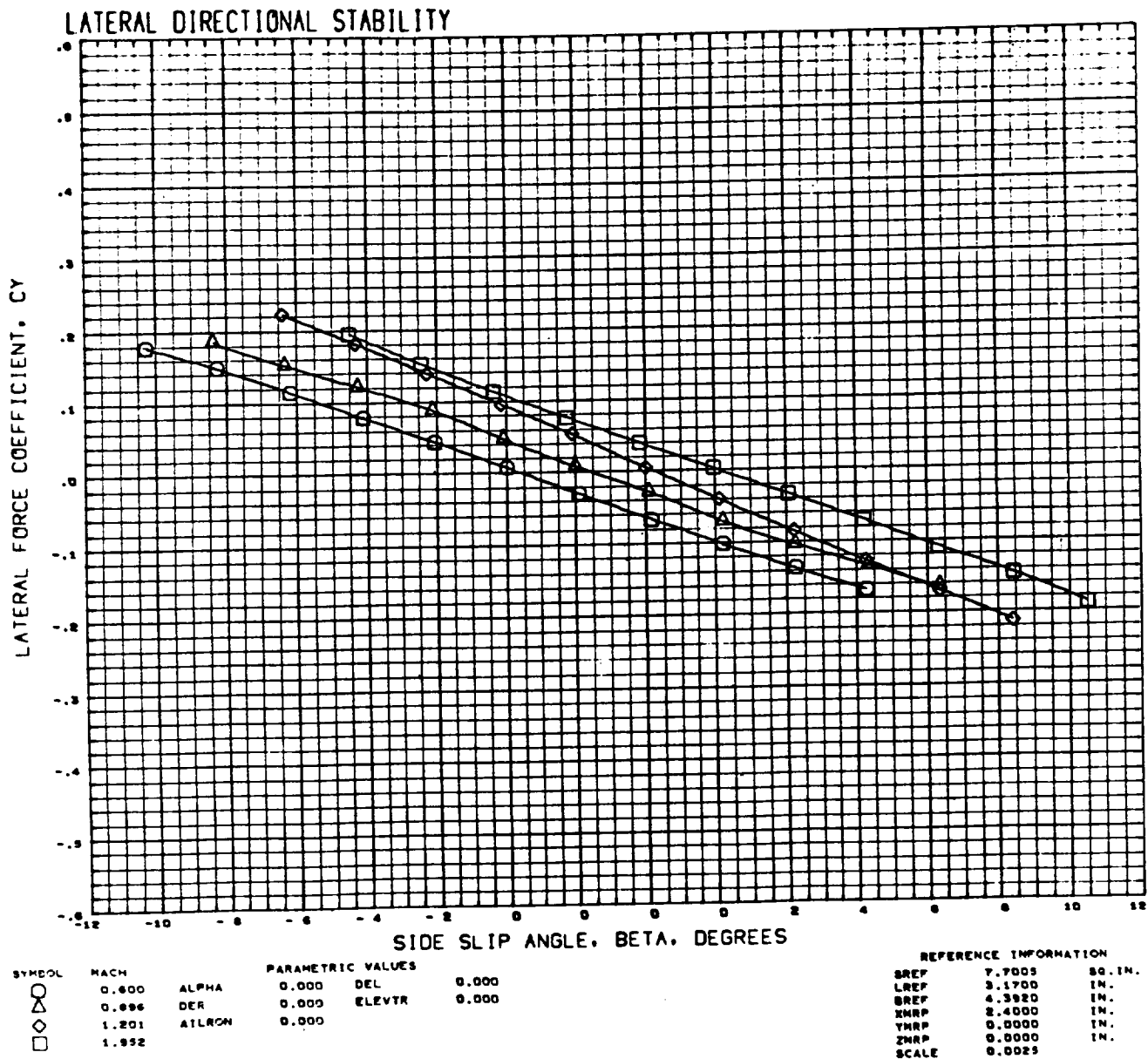
AR11981-3

MODEL

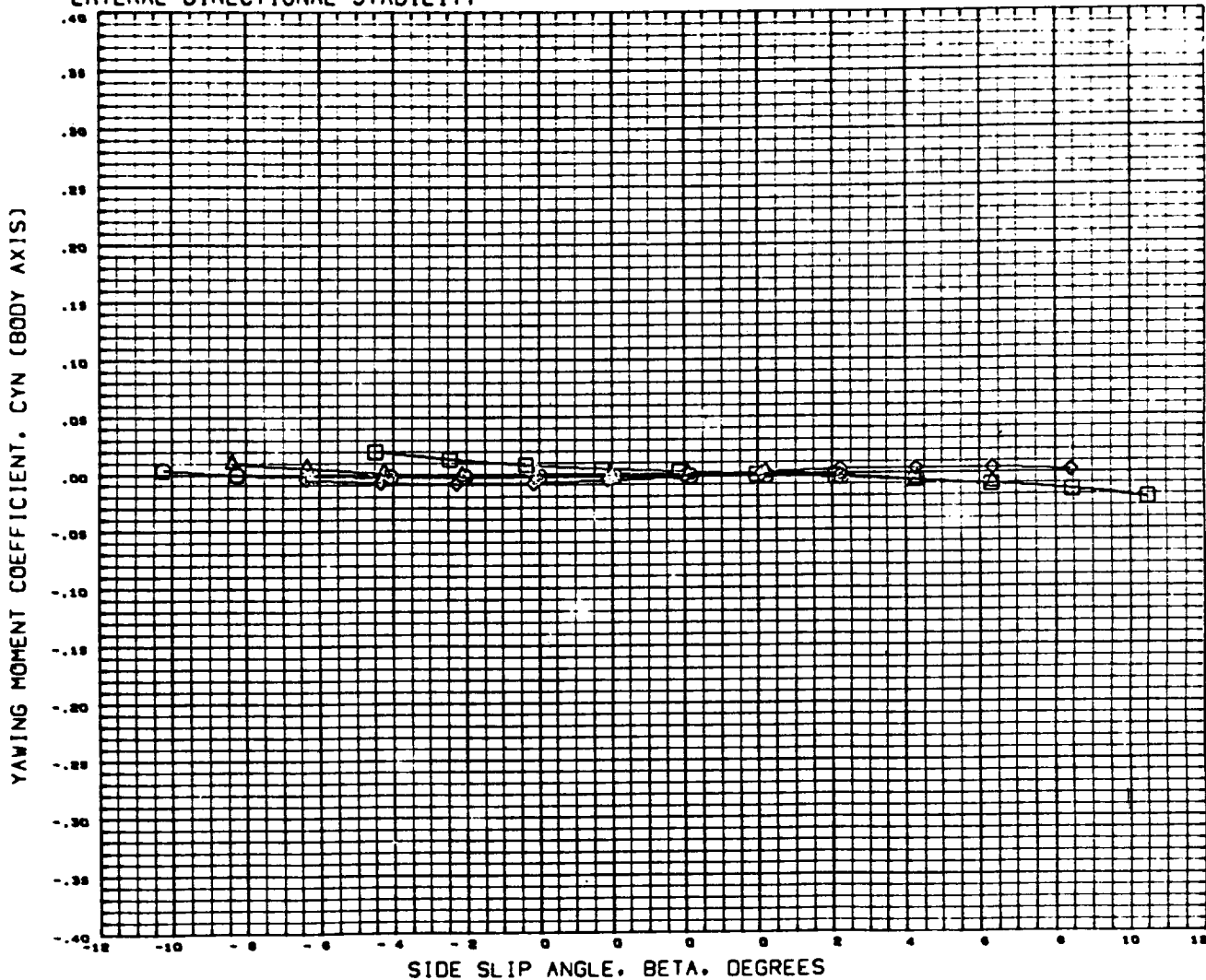
W6H82C12

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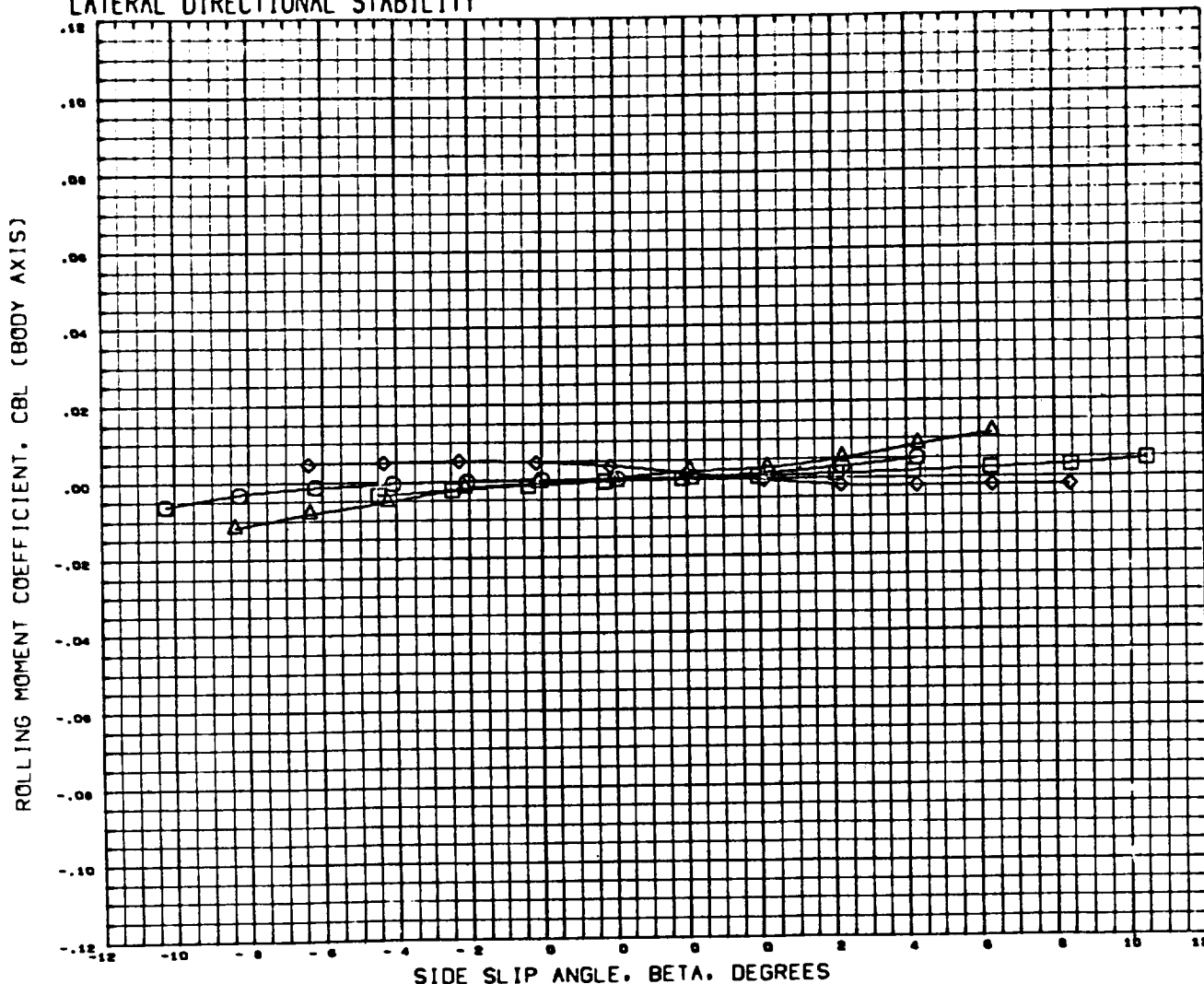
LATERAL DIRECTIONAL STABILITY



SYMBOL	PARAMETRIC VALUES					REFERENCE INFORMATION		
	MACH	ALPHA	DEL	ELEVTR		SREF	7.7005	SQ. IN.
	0.800	0.000	0.000	0.000		LREF	3.1700	IN.
	0.896	0.000	0.000	0.000		BREF	4.3920	IN.
	1.201	0.000	0.000	0.000		XMRP	2.4000	IN.
	1.932	0.000	0.000	0.000		YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

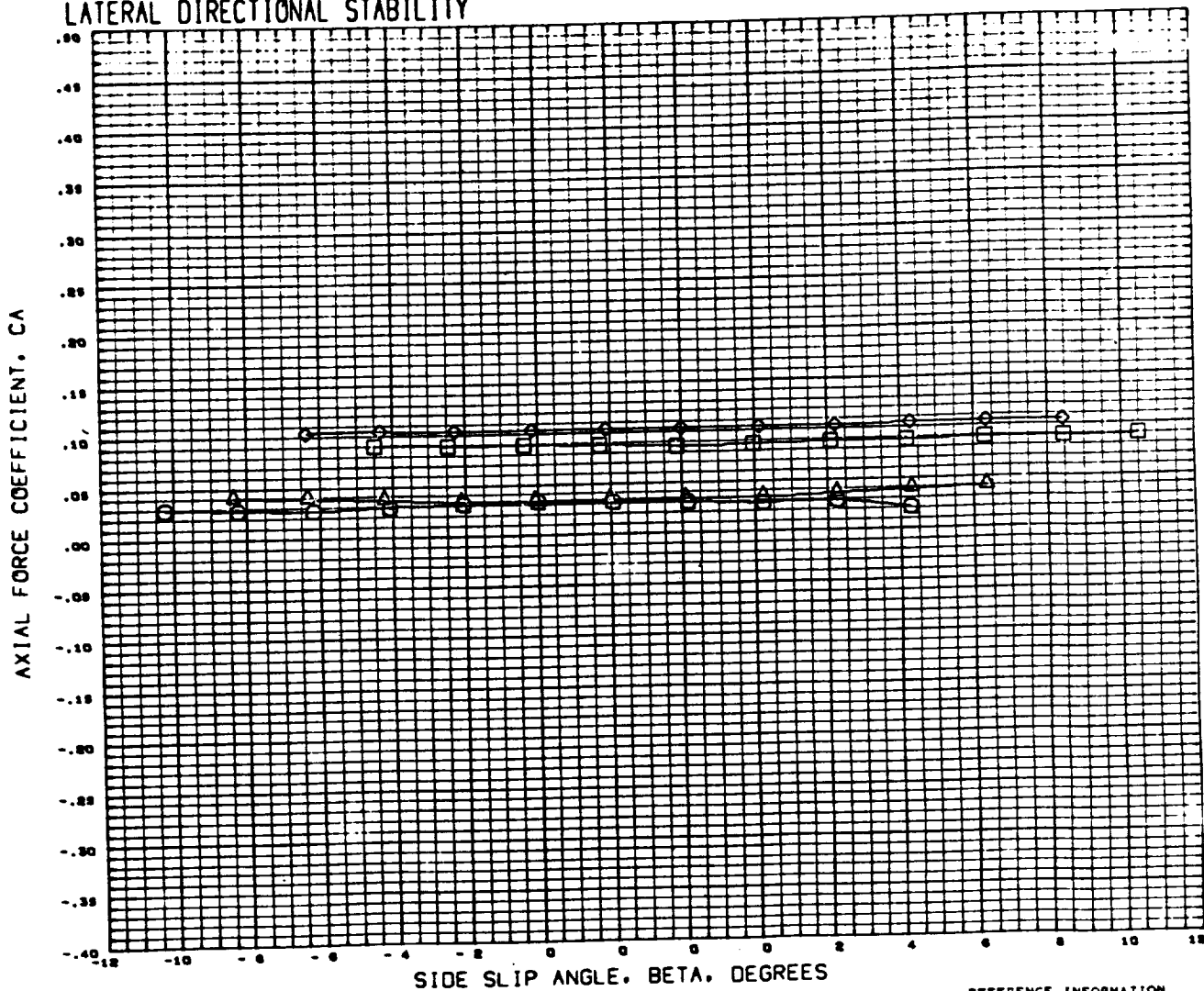
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR		SREF	sq. in.	
○	0.600	0.000	0.000	0.000		LREF	3.1700	IN.
△	0.896	0.000	0.000	0.000		SREF	4.3920	IN.
◇	1.201	0.000	0.000	0.000		XMRP	2.4000	IN.
□	1.932	0.000	0.000	0.000		YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	0.000
○	0.600	0.000	0.000	DEL	0.000
△	0.896	0.000	0.000	ELEVTR	0.000
◇	1.201	0.000	0.000		
□	1.952	0.000	0.000		

REFERENCE INFORMATION		
SREF	7.7005	50. IN.
LREF	3.1700	IN.
BREF	4.3520	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

MODEL

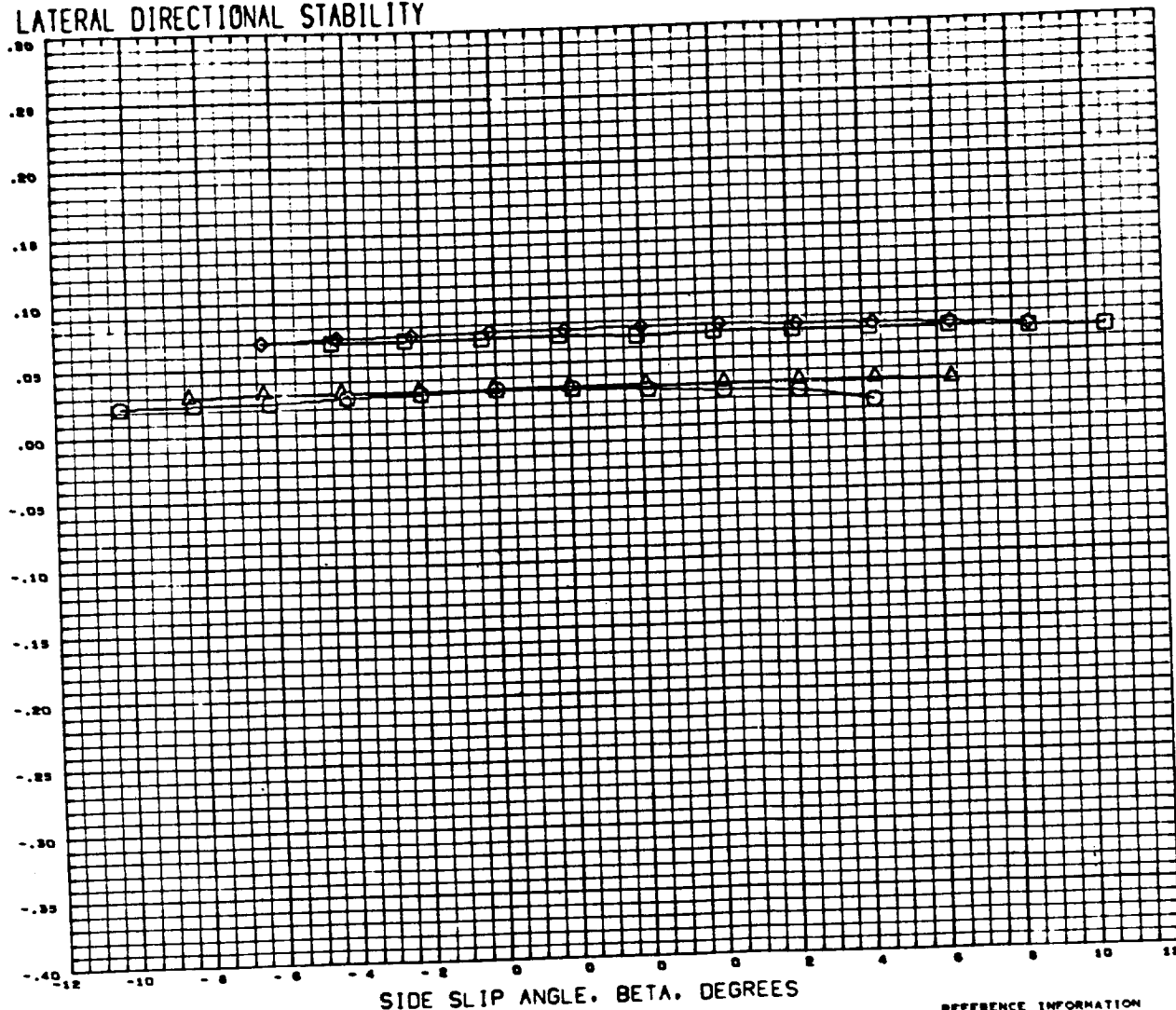
W982V1

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LATERAL DIRECTIONAL STABILITY

FOREBODY AXIAL FORCE COEFFICIENT, CAF



SYMBOL	PARAMETRIC VALUES					
	MACH	ALPHA	DEL	DEL	ELEVTR	
	0.600	0.000	0.000	0.000	0.000	
	0.896	0.000	0.000	0.000	0.000	
	1.201	0.000	0.000	0.000	0.000	

REFERENCE INFORMATION		
BREF	7.7005	sq. in.
LREF	3.1700	in.
SREF	4.3920	in.
YMRP	2.4000	in.
ZMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

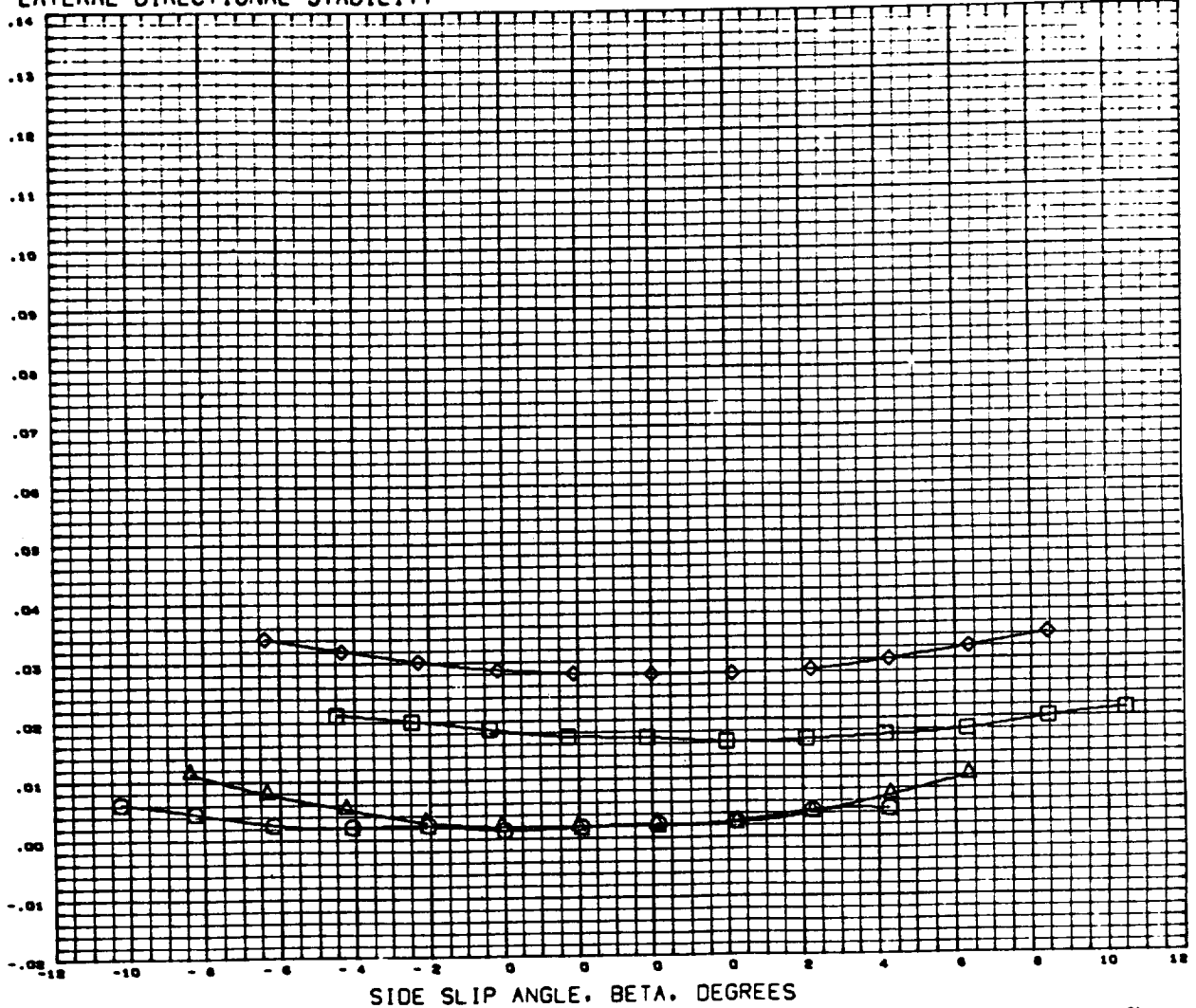
W9B2V1

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LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB



SYMBOL
○
△
◇
□

MACH
0.600
0.896
1.201
1.992

PARAMETRIC VALUES
ALPHA 0.000
DER 0.000
AILRON 0.000

DEL 0.000
ELEVTR 0.000

REFERENCE INFORMATION
SREF 7.7005 33. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
YMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0023

DATA HIST. CODE 0E

M496-MSFC

AR1198I-3

MODEL

W982V1

(E3823F)

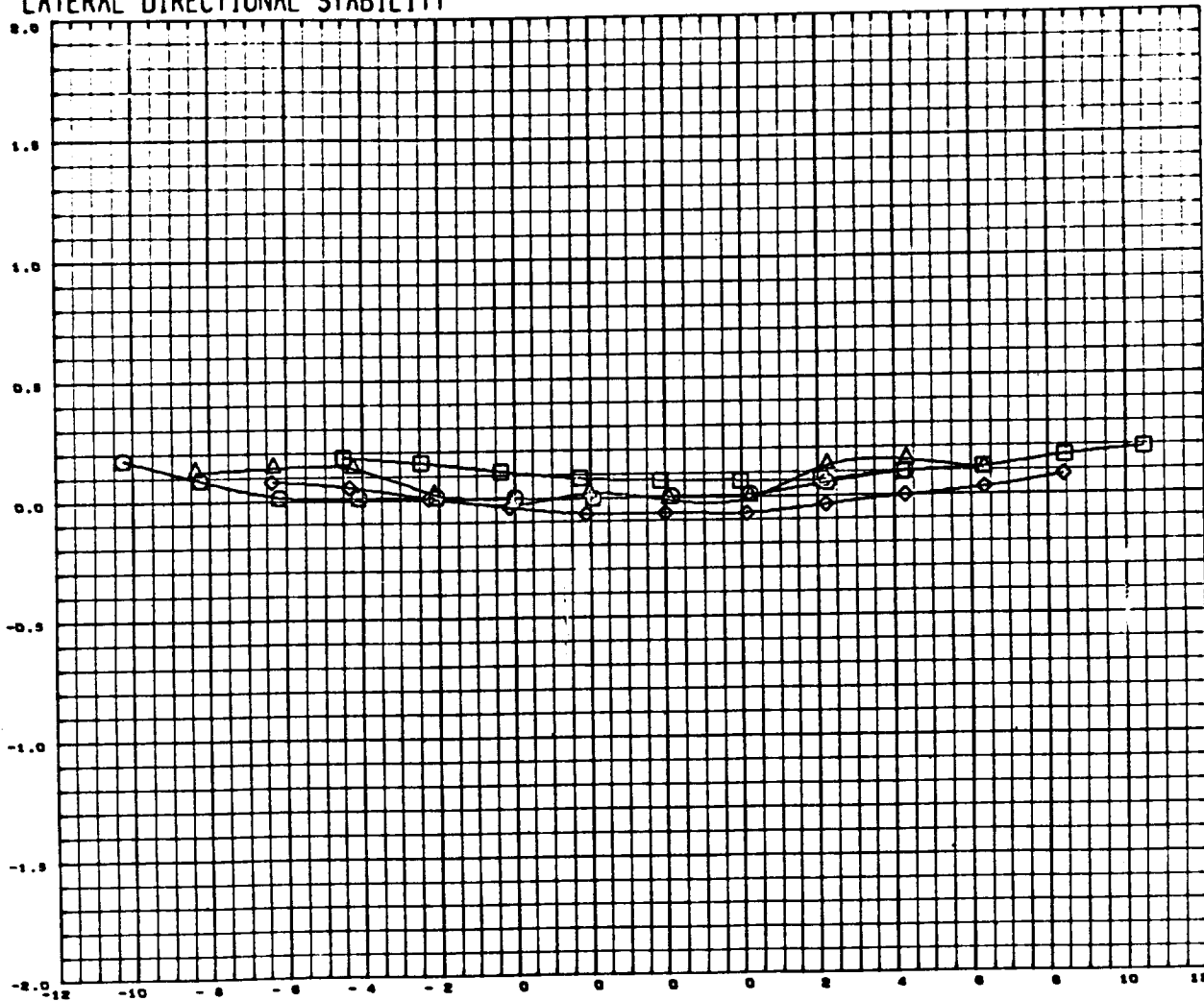
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LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	0.000
○	0.800	0.000	DEL	0.000	
△	0.896	0.000	ELEVTR	0.000	
◇	1.201	0.000			
□	1.952	0.000			

REFERENCE INFORMATION		
SREP	7.9005	80. IN.
LREP	3.1700	IN.
BREP	4.3520	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA MIST. CODE *E

M496-MSFC

AR11981-3

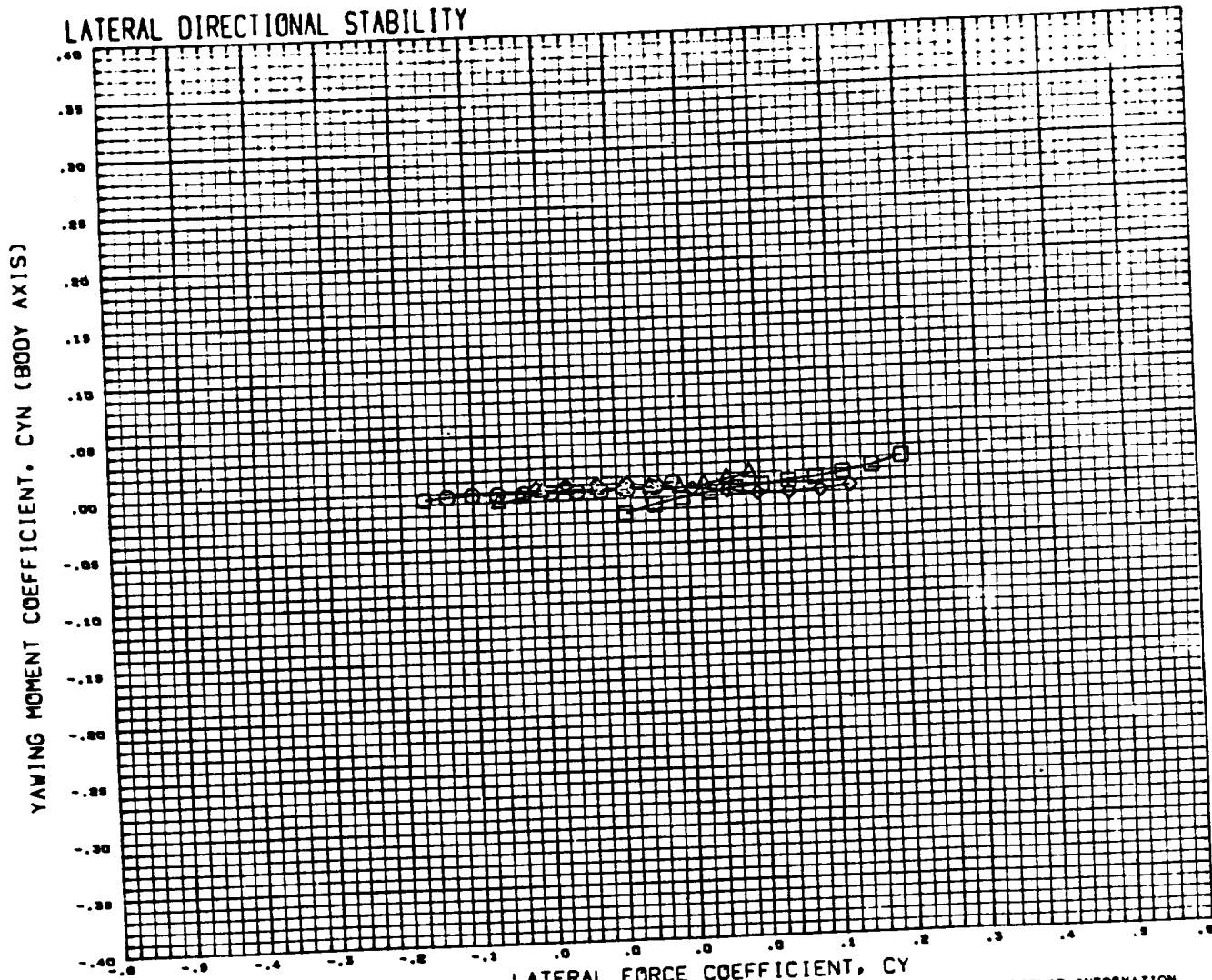
MODEL

W9B2V1

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	DEL	0.000
○	0.600	ALPHA	0.000	0.000
△	0.896	DER	0.000	ELEVTR
◇	1.201	ATLRON	0.000	
□	1.932			

REFERENCE INFORMATION		
SREF	7.7003	50. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XWRP	2.4000	IN.
YWRP	0.0000	IN.
ZWRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

M496-MSFC

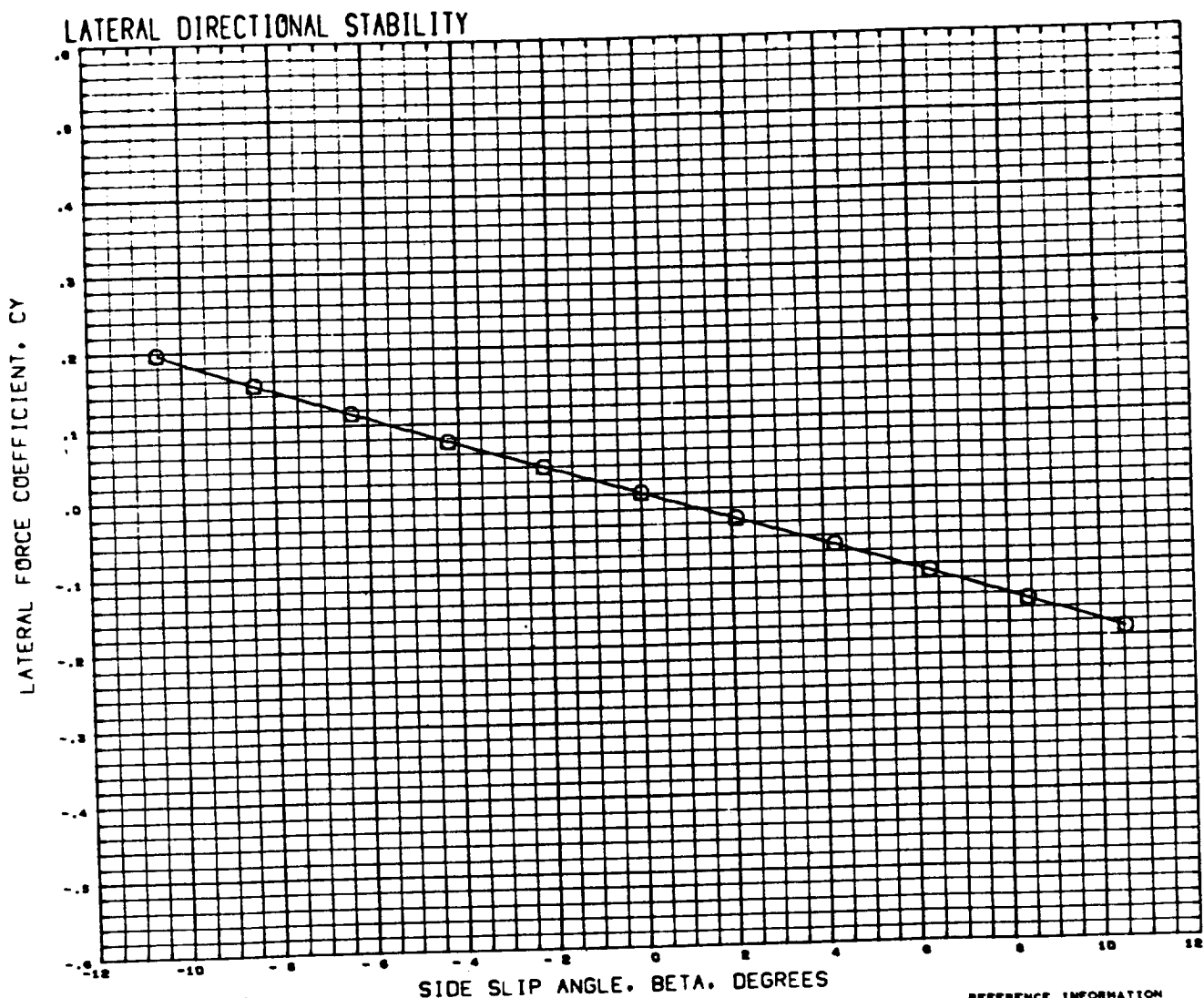
AR11981-3

MOOEL

W982V1

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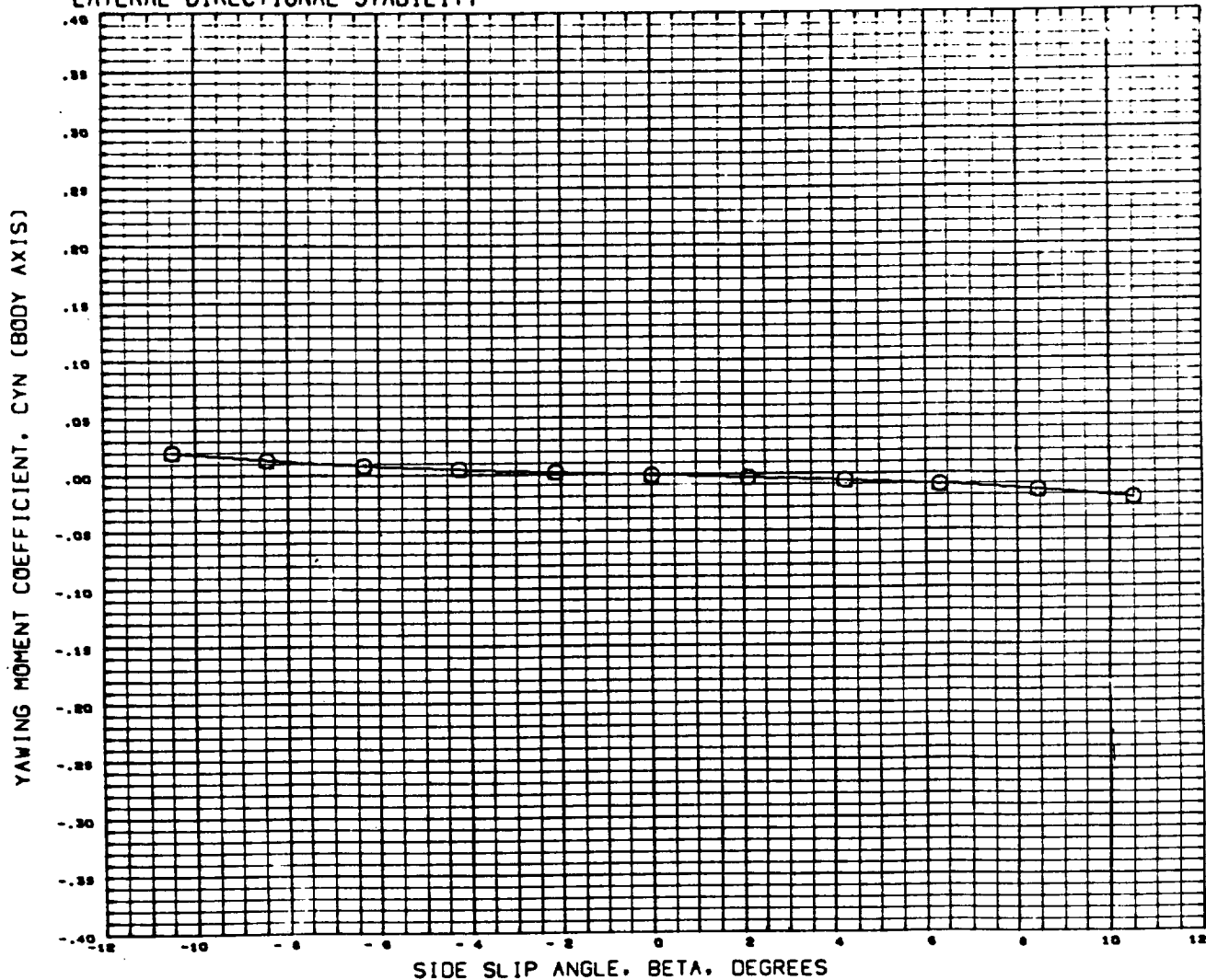
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SYMBOL ○	MACH 1.937	PARAMETRIC VALUES			
		ALPHA	0.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	7.7003	80. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	1.957	0.000	0.000	0.000	0.000	7.7005	3.1700	4.3920
		DER						
		ATLROM						
						2.4000	0.0000	0.0000
						0.0000	0.0000	0.0025

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY



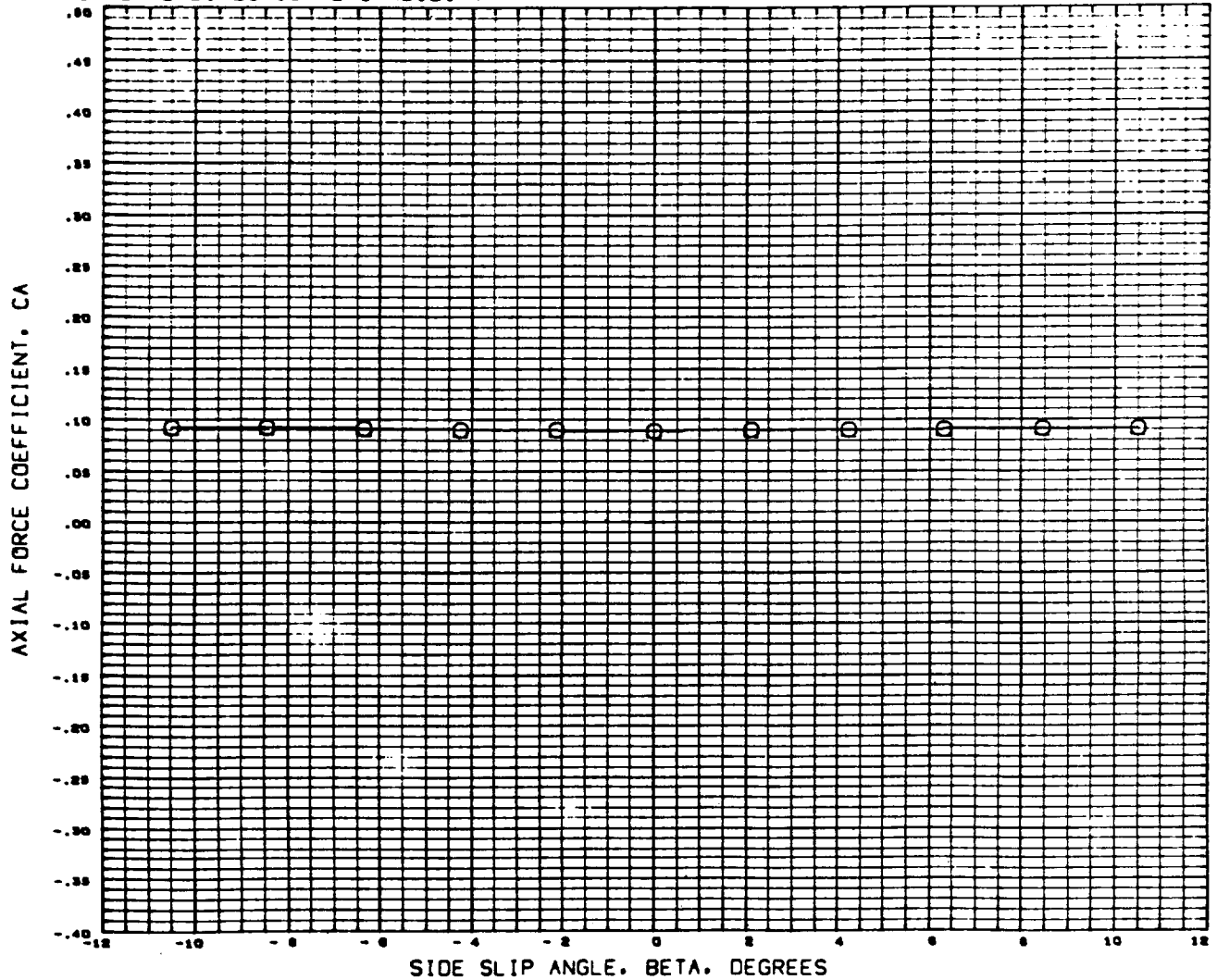
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.957	ALPHA	0.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREP	7.9005	SQ. IN.
LREP	3.1700	IN.
BRP	4.3950	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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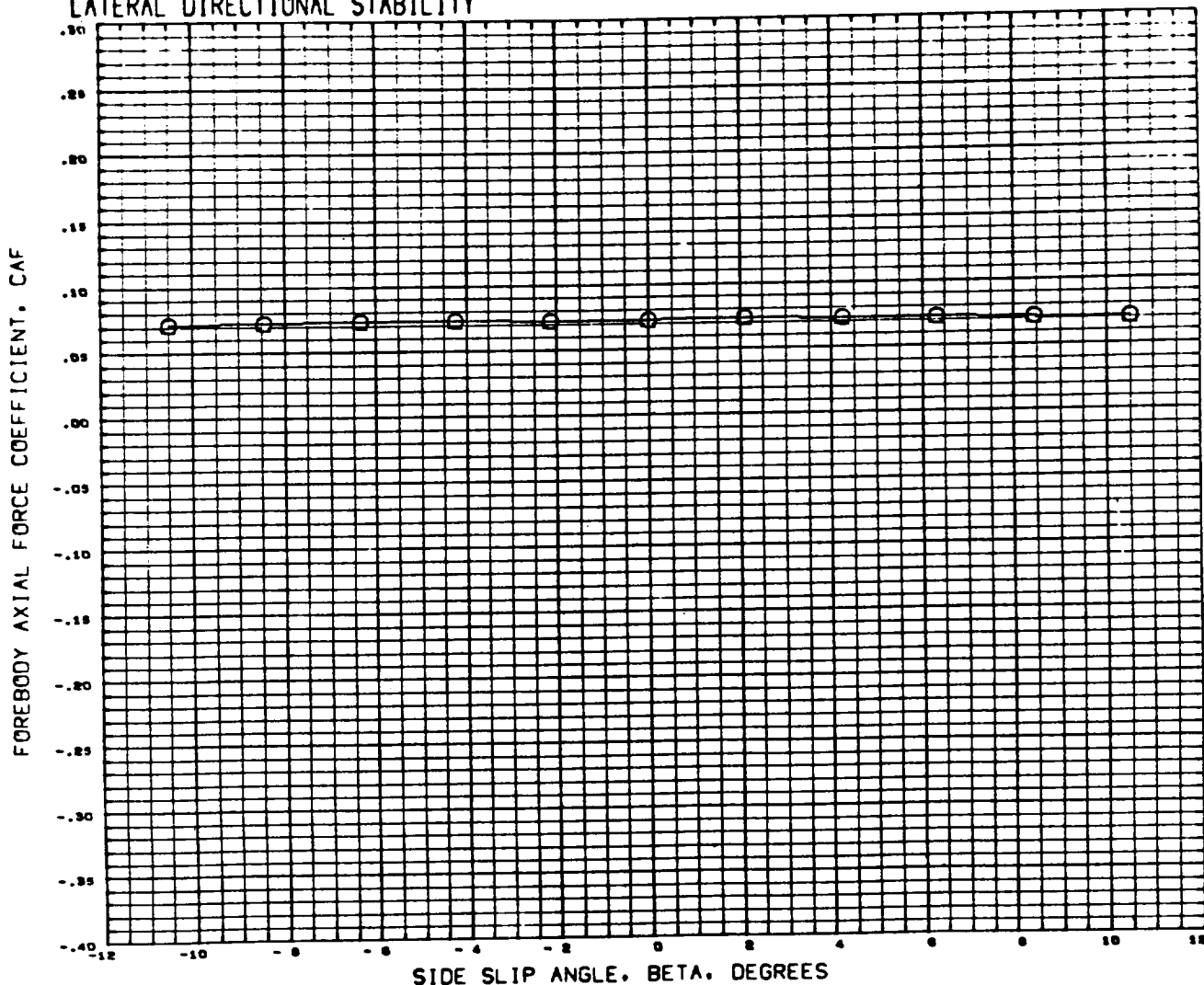
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.937	ALPHA	0.000	DEL	0.000	SREF	7.7003	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

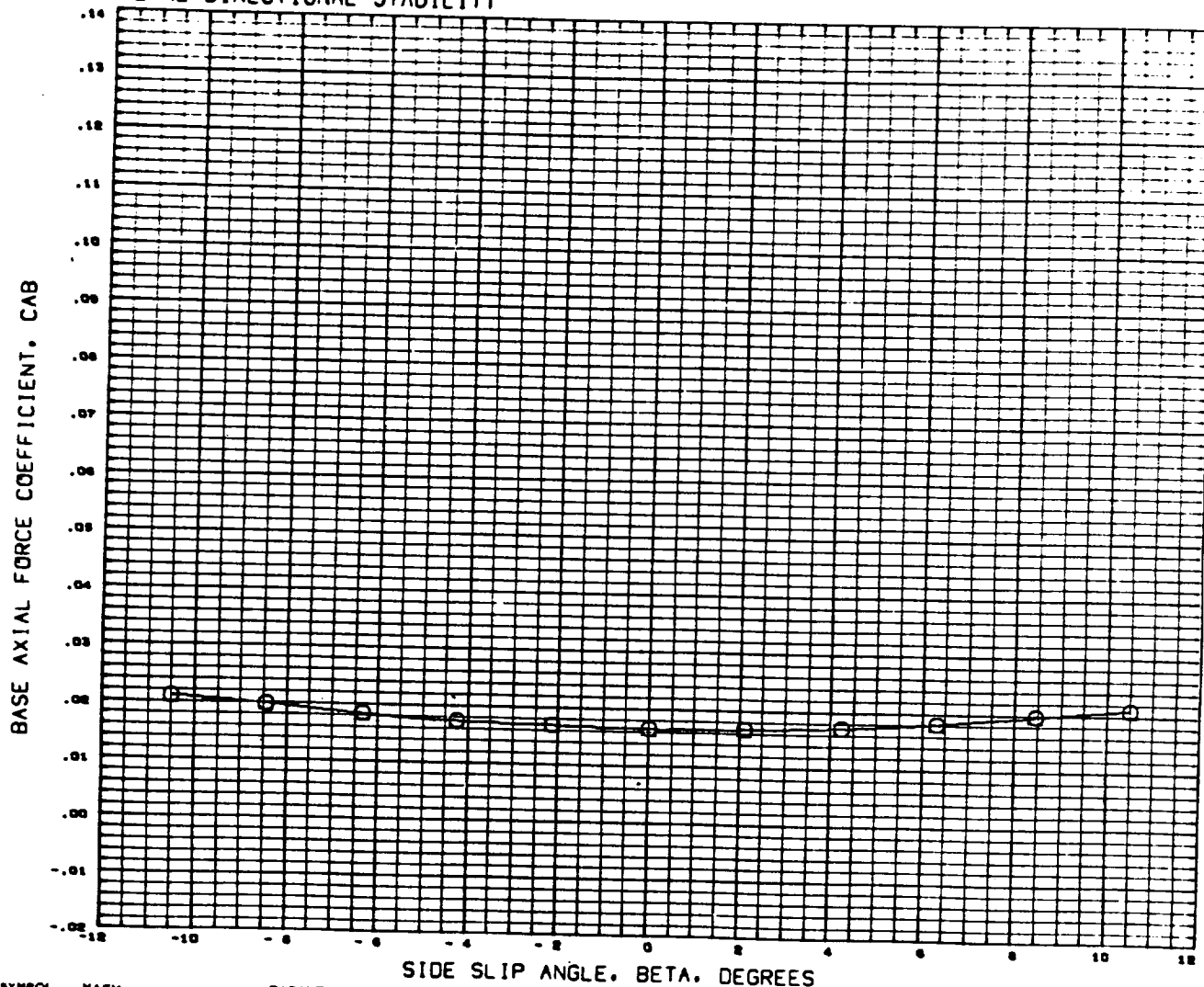
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	BREF	LREF	GREF
○	1.937	0.000	0.000	0.000	0.000	7.7005	3.1700	4.3920
		ATLROM				XMRP	2.4000	YMRP
						ZMRP	0.0000	SCALE
							0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 1.997

PARAMETRIC VALUES			
ALPHA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	0.000

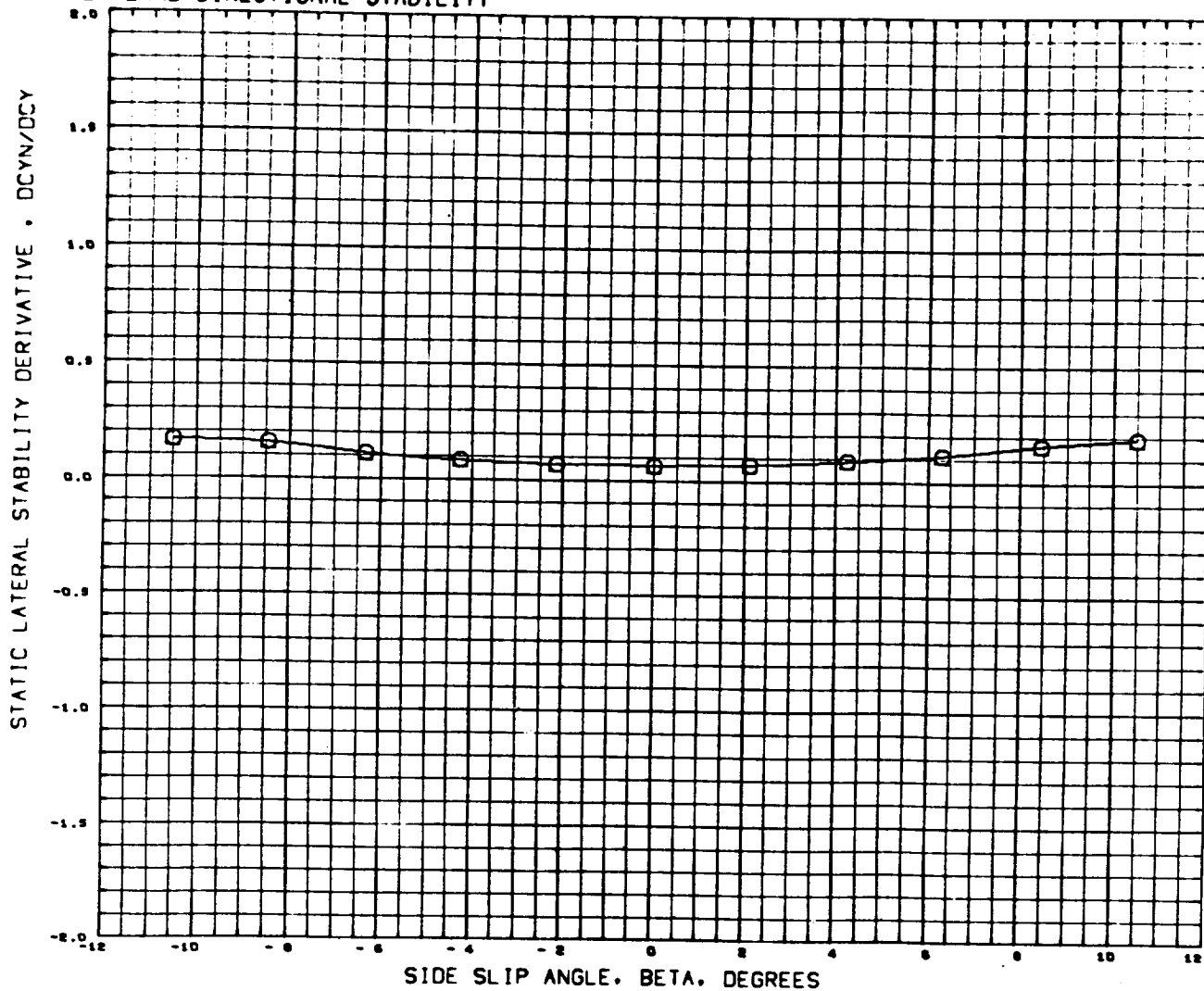
REFERENCE INFORMATION

SREP	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

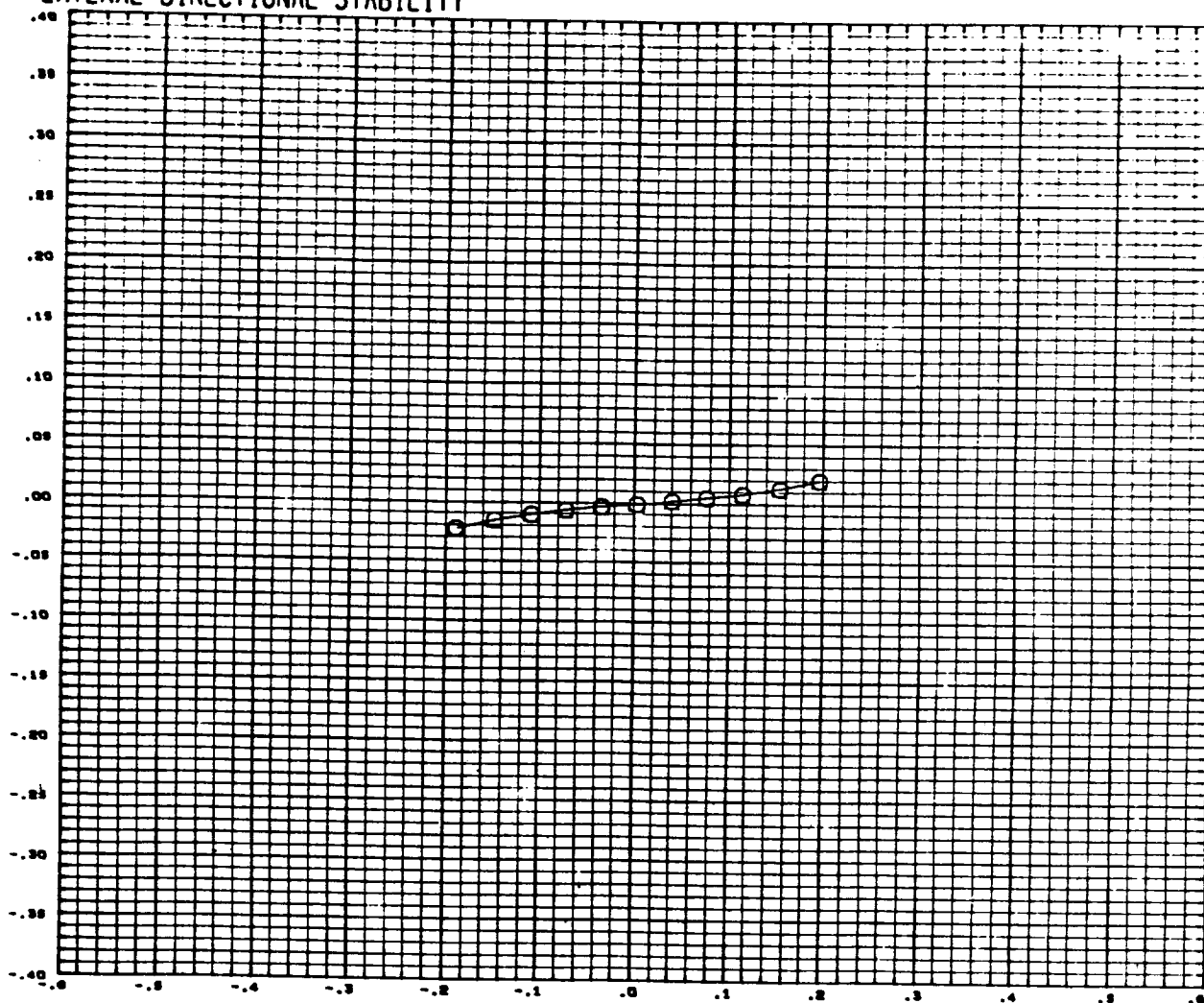


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.937	ALPHA	0.000	DEL	0.000	SREF	7.7005	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



LATERAL FORCE COEFFICIENT, CY

SYMBOL
O

MACH
1.937

ALPHA
0.000
DEL
0.000
ATLRON
0.000

PARAMETRIC VALUES

DEL 0.000
ELEVTR 0.000
CANARD 0.000

REFERENCE INFORMATION

SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE 0E

M496-MSFC

AR1198I-3

MODEL

W982C12V1

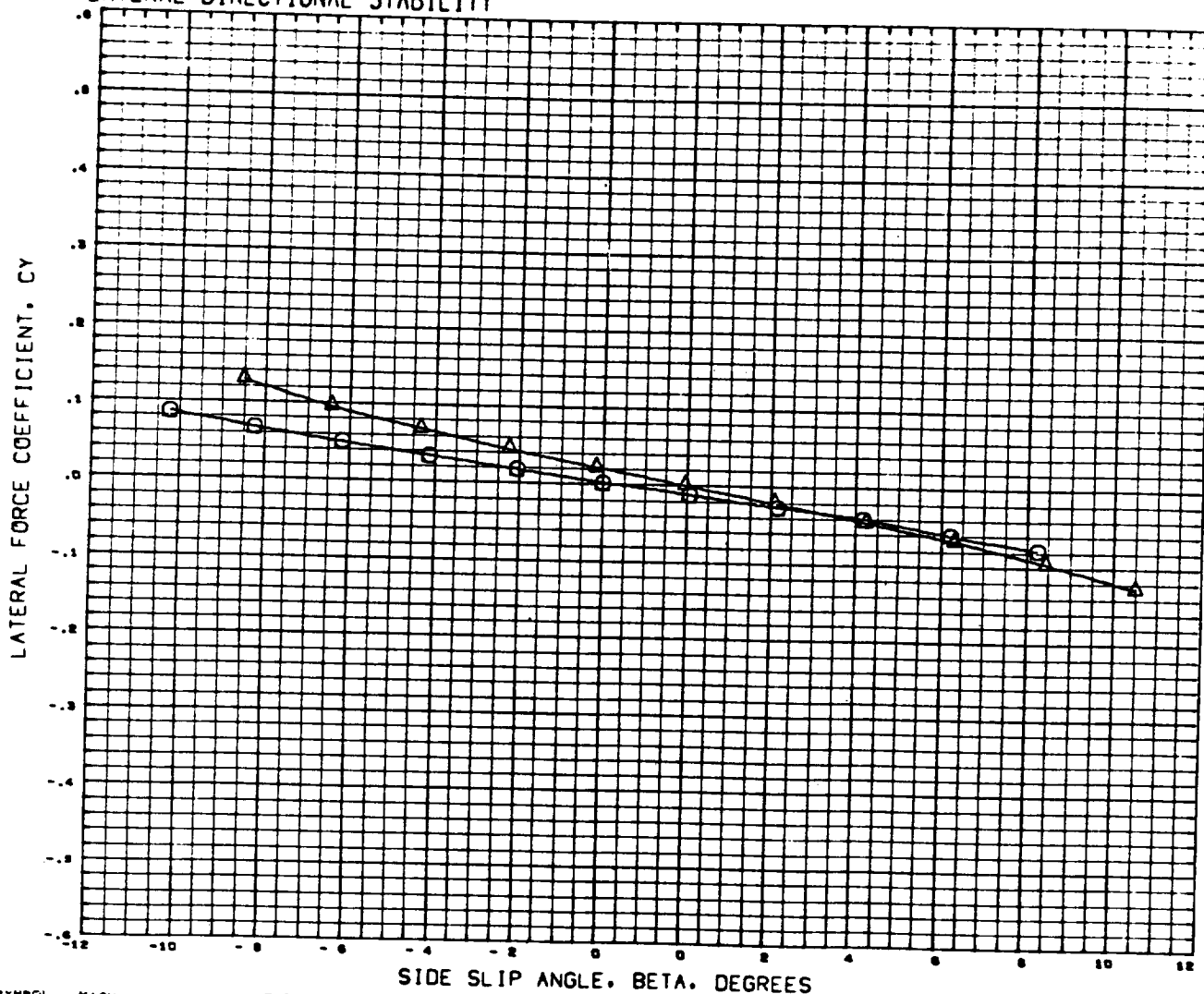
(E3824F)

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LATERAL DIRECTIONAL STABILITY



SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	0.599	ALPHA	0.000	DEL	0.000
	1.961	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

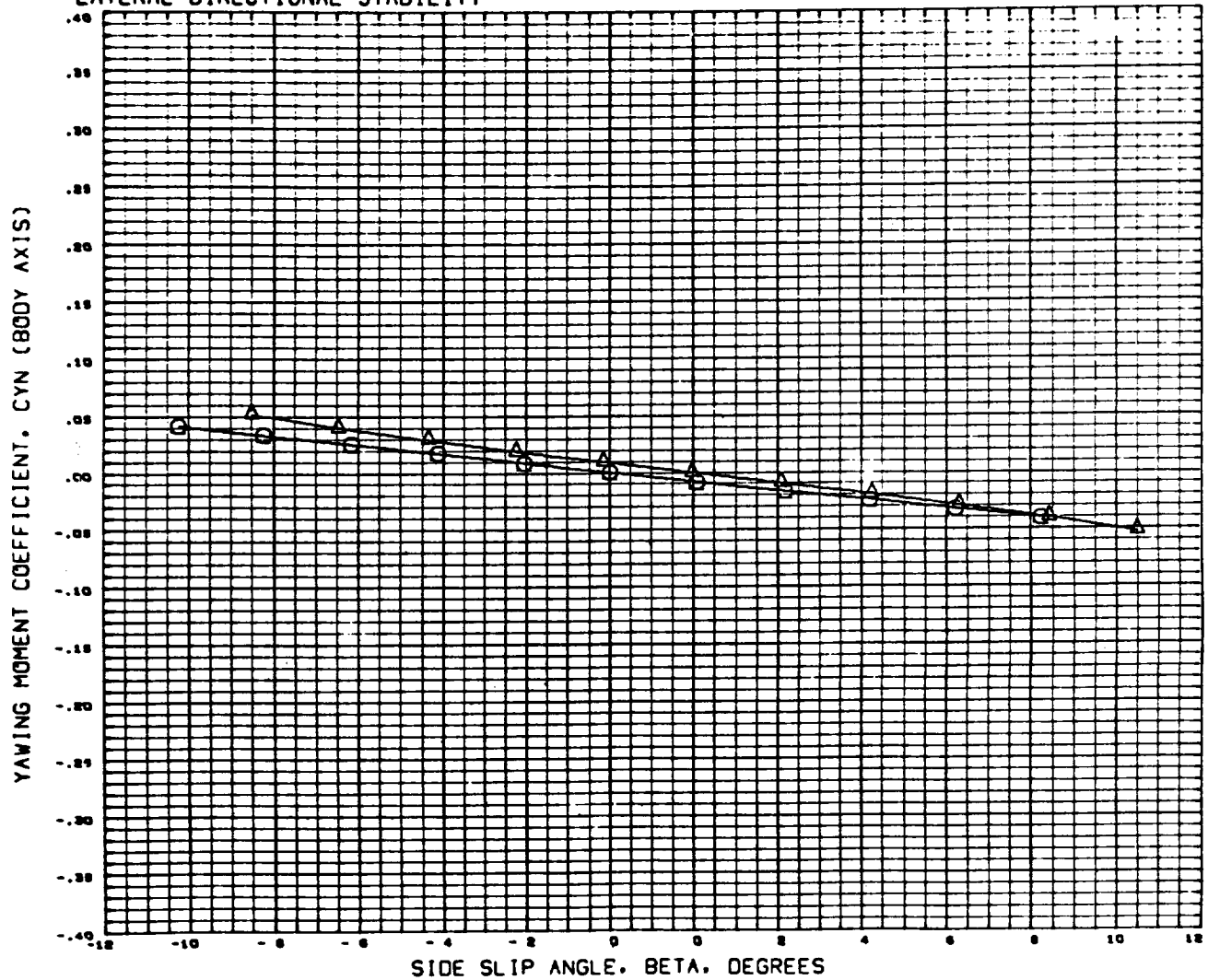
REFERENCE INFORMATION		
SREF	7.7005	sq. in.
LREF	3.1700	in.
BREF	4.3920	in.
KMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W982

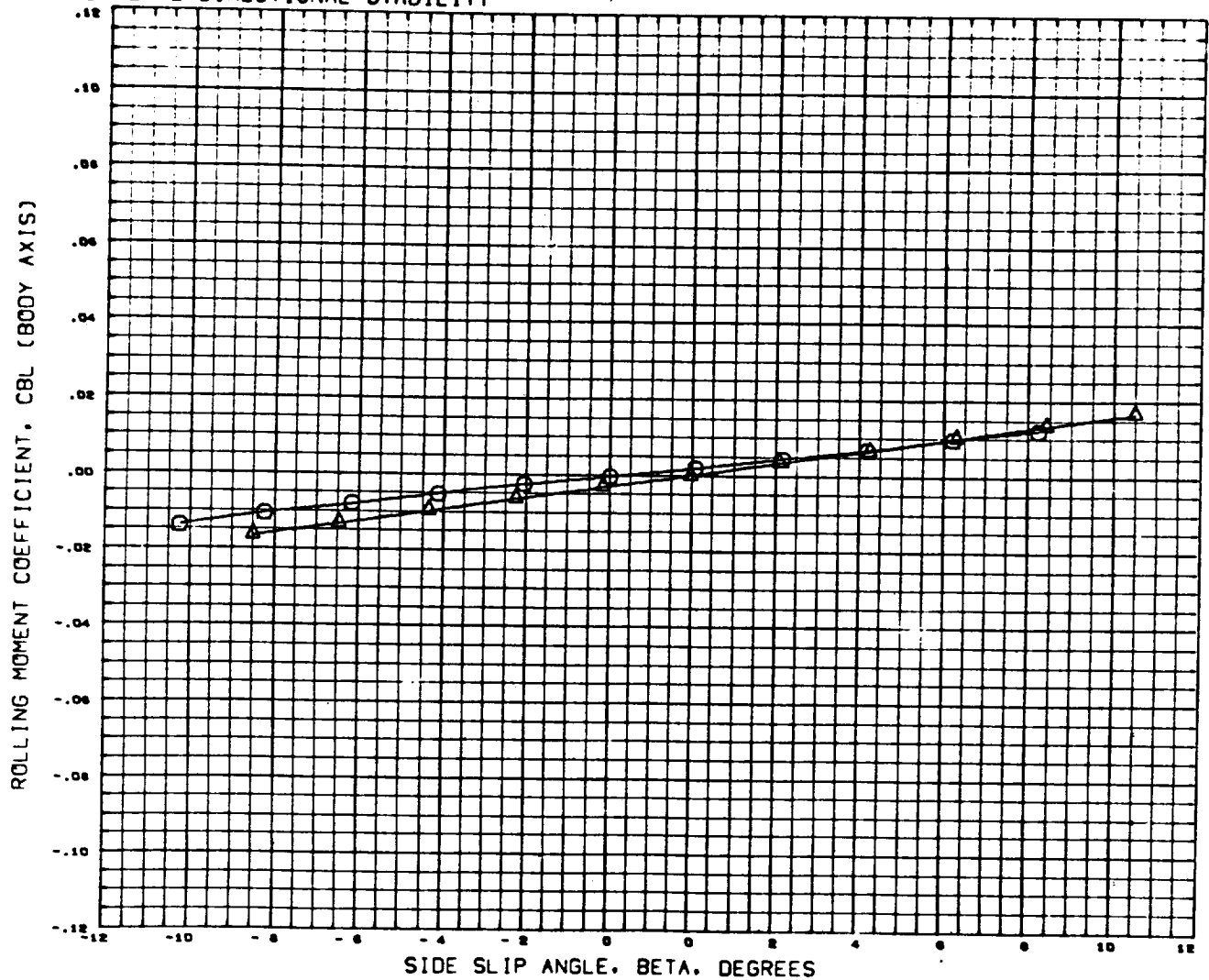
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LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O Δ		0.599		ALPHA	0.000	DEL	0.000	SREF	7.7005	50. IN.
		1.991		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				ATLRON	0.000			BREF	4.3920	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

LATERAL DIRECTIONAL STABILITY

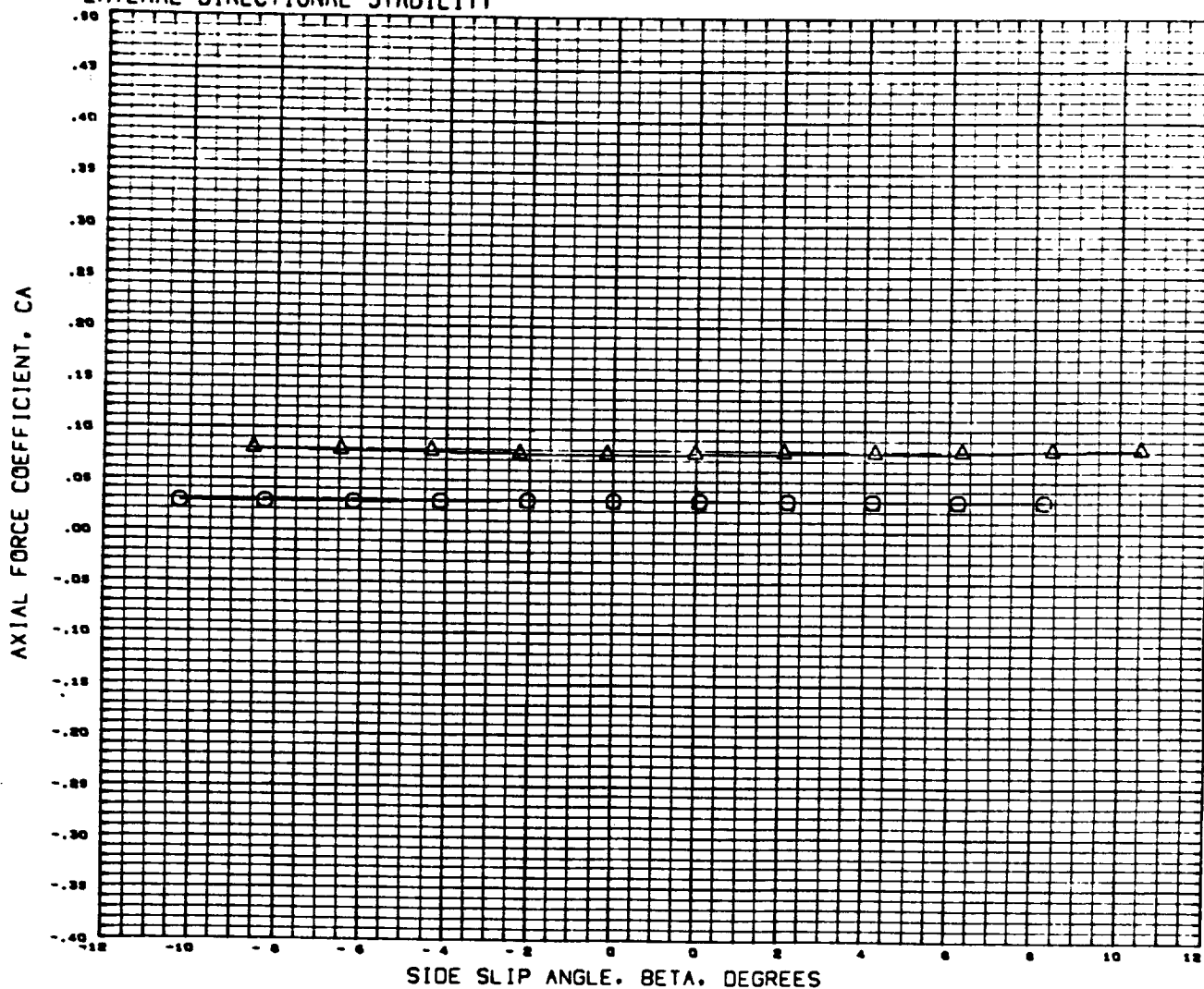


SYMBOL	MACH	PARAMETRIC VALUES			
	0.599	ALPHA	0.000	DEL	0.000
	1.961	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

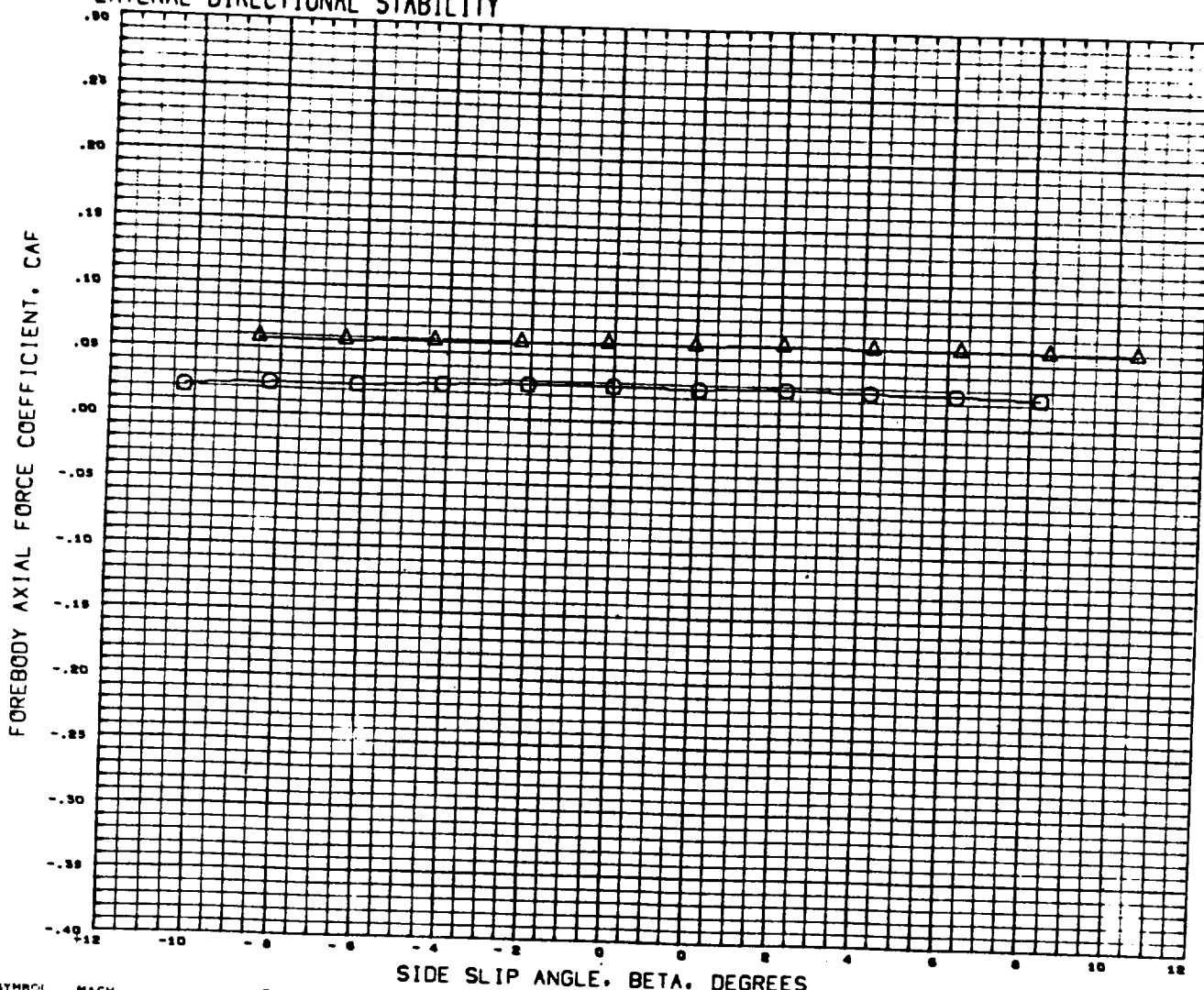


SYMBOL Δ MACH 0.599 ALPHA 0.000 DEL 0.000
 1.961 DER 0.000 ELEVTR 0.000
 ATLRON 0.000

REFERENCE INFORMATION
 SREF 7.7005 SQ. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL



MACH

0.999
1.981

ALPHA
DER
ATLON

PARAMETRIC VALUES

0.000 DEL 0.000
0.000 ELEVTR 0.000
0.000

SIDE SLIP ANGLE, BETA, DEGREES

REFERENCE INFORMATION

SREF 7.7003 50. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE 0E

M496-MSFC

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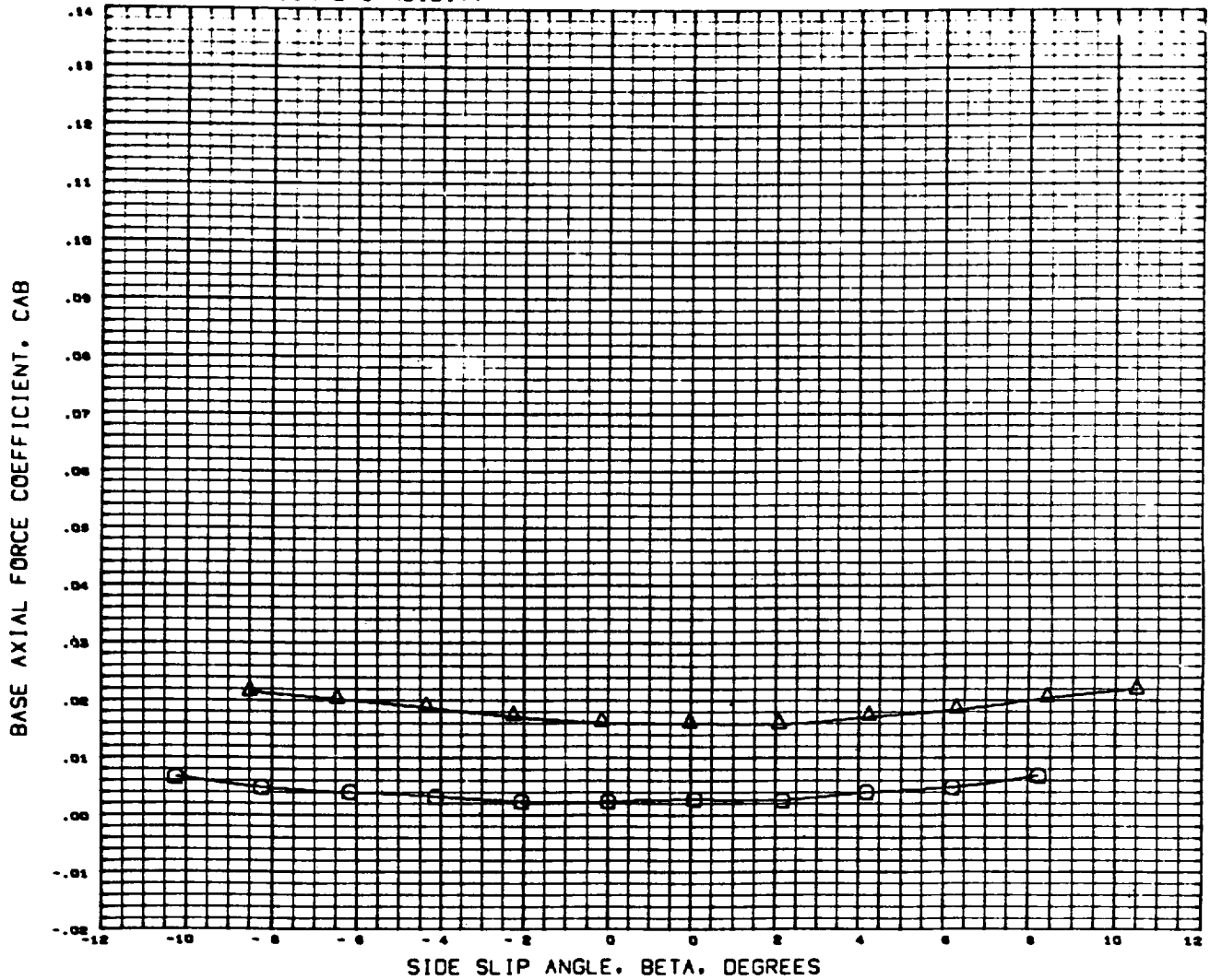
MODEL

W982

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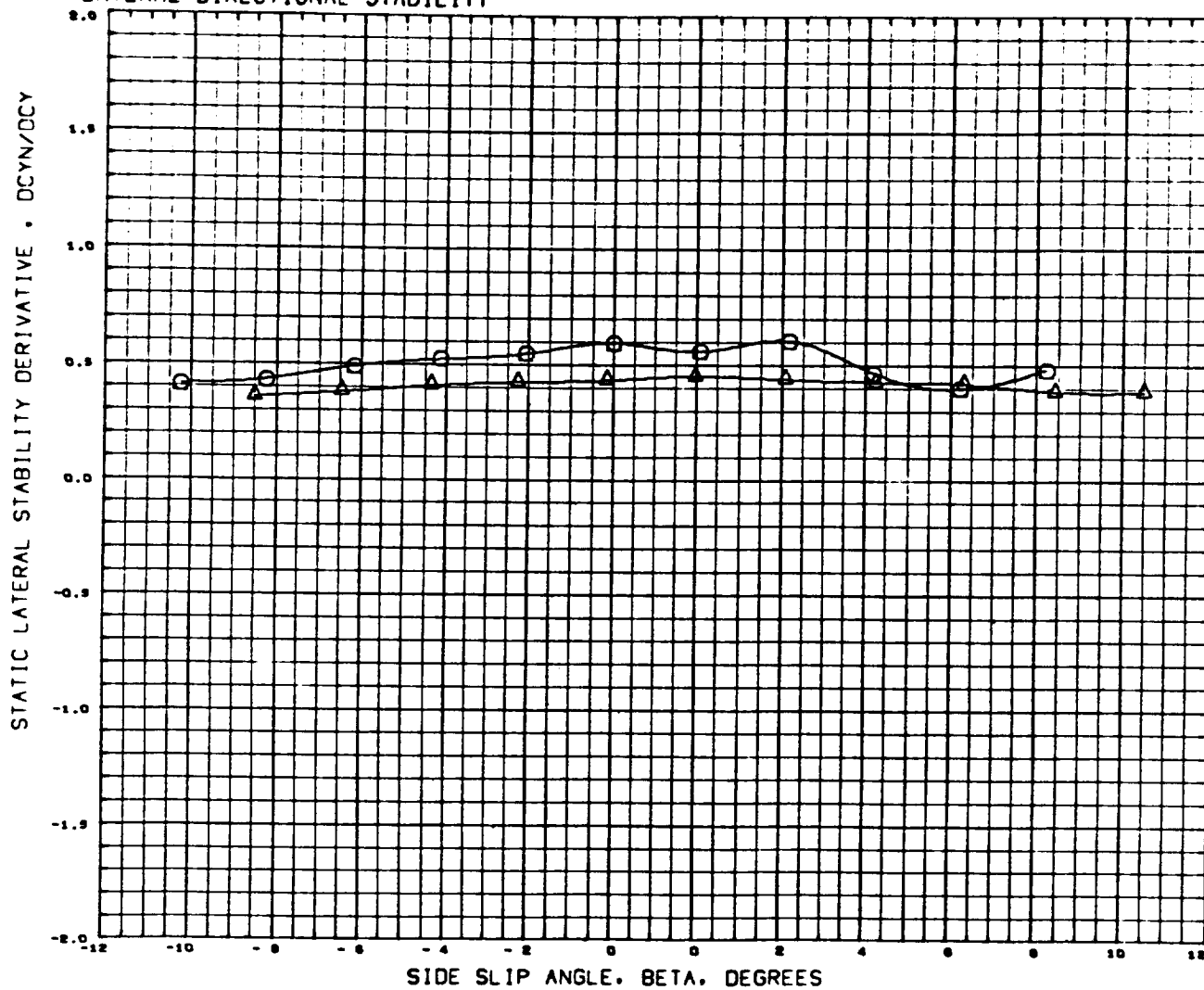
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.999	1.961	ALPHA	DEL	DER	ELEVTR	SREP	LRP	BRP
○			0.000	0.000	0.000	0.000	7.7005	3.1700	4.3920
△			0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
			0.000				2HRP	0.0000	0.0025
							SCALE		

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY



SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	0.999	ALPHA	0.000	DEL	0.000
	1.961	DER	0.000	ELEVTR	0.000
		ATLROM	0.000		

REFERENCE INFORMATION	
BREF	7.7003 IN.
LREF	3.1700 IN.
BREF	4.3920 IN.
XHRP	2.4000 IN.
YHRP	0.0000 IN.
ZHRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

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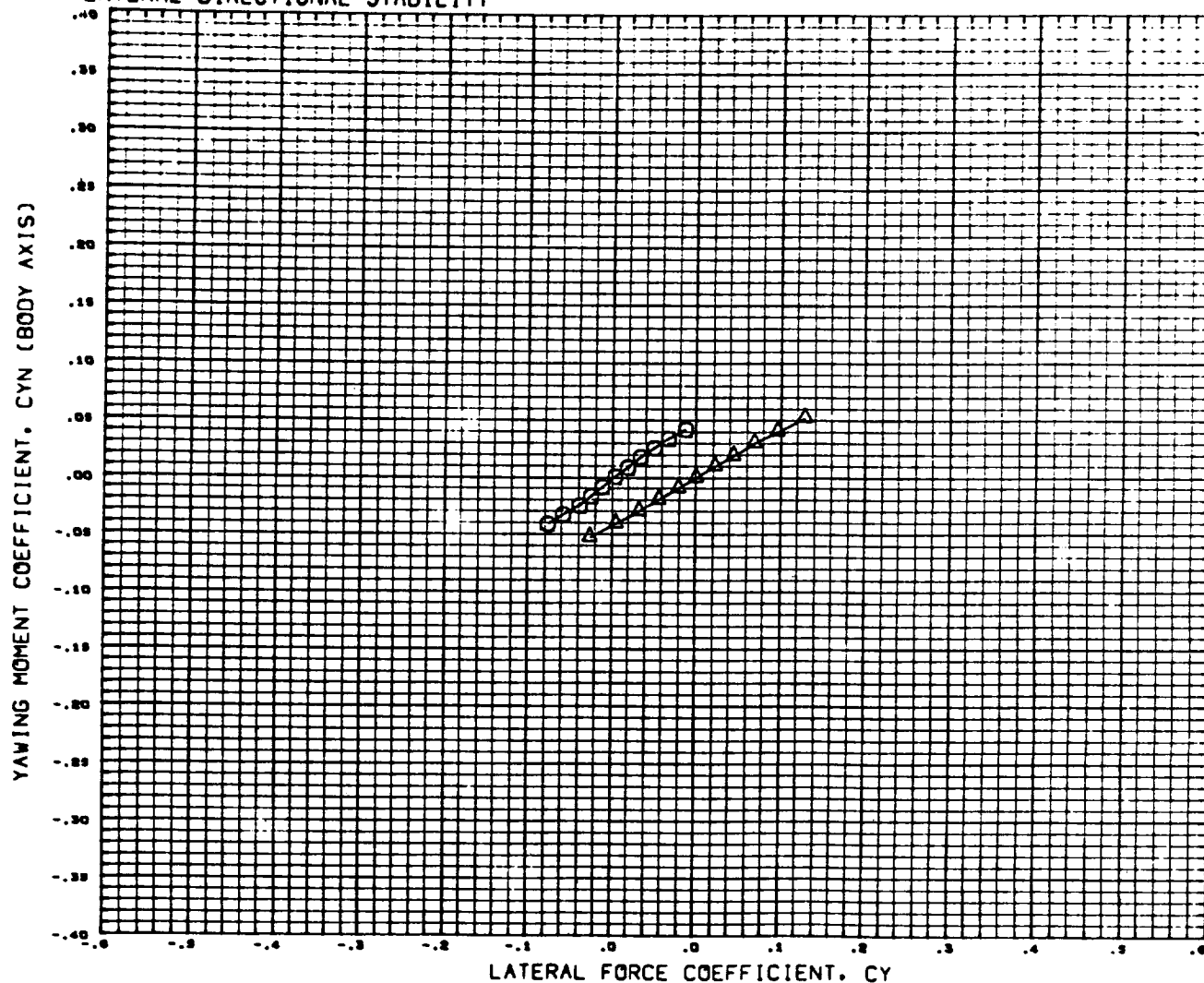
MODEL

W9B2

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LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O Δ		0.999	ALPHA	0.000	DEL	0.000		SREF	7.7005	SQ. IN.
		1.961	DER	0.000	ELEVTR	0.000		LREF	3.1700	IN.
			AILRON	0.000				BREF	4.3920	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
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								SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

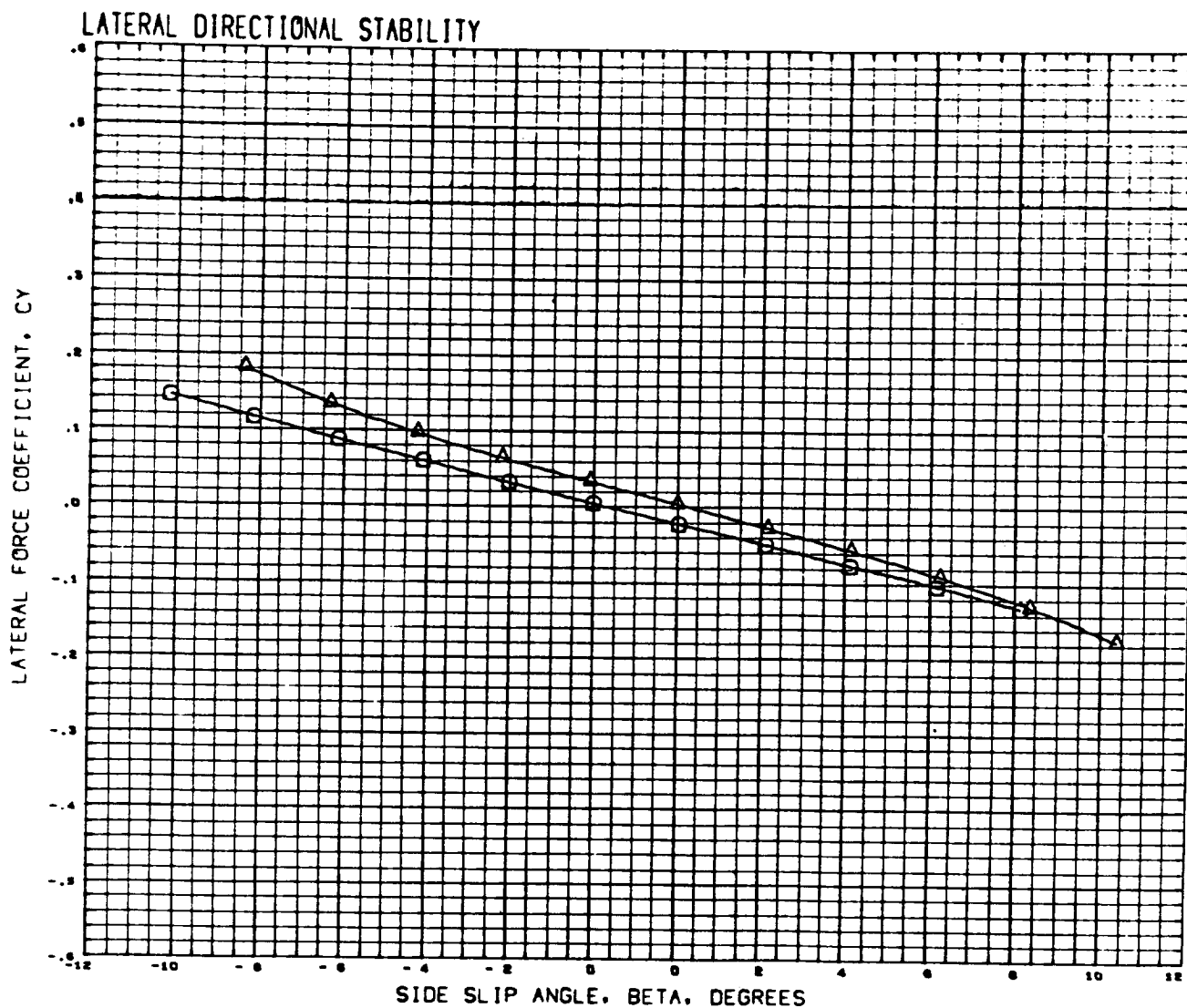
W9B2

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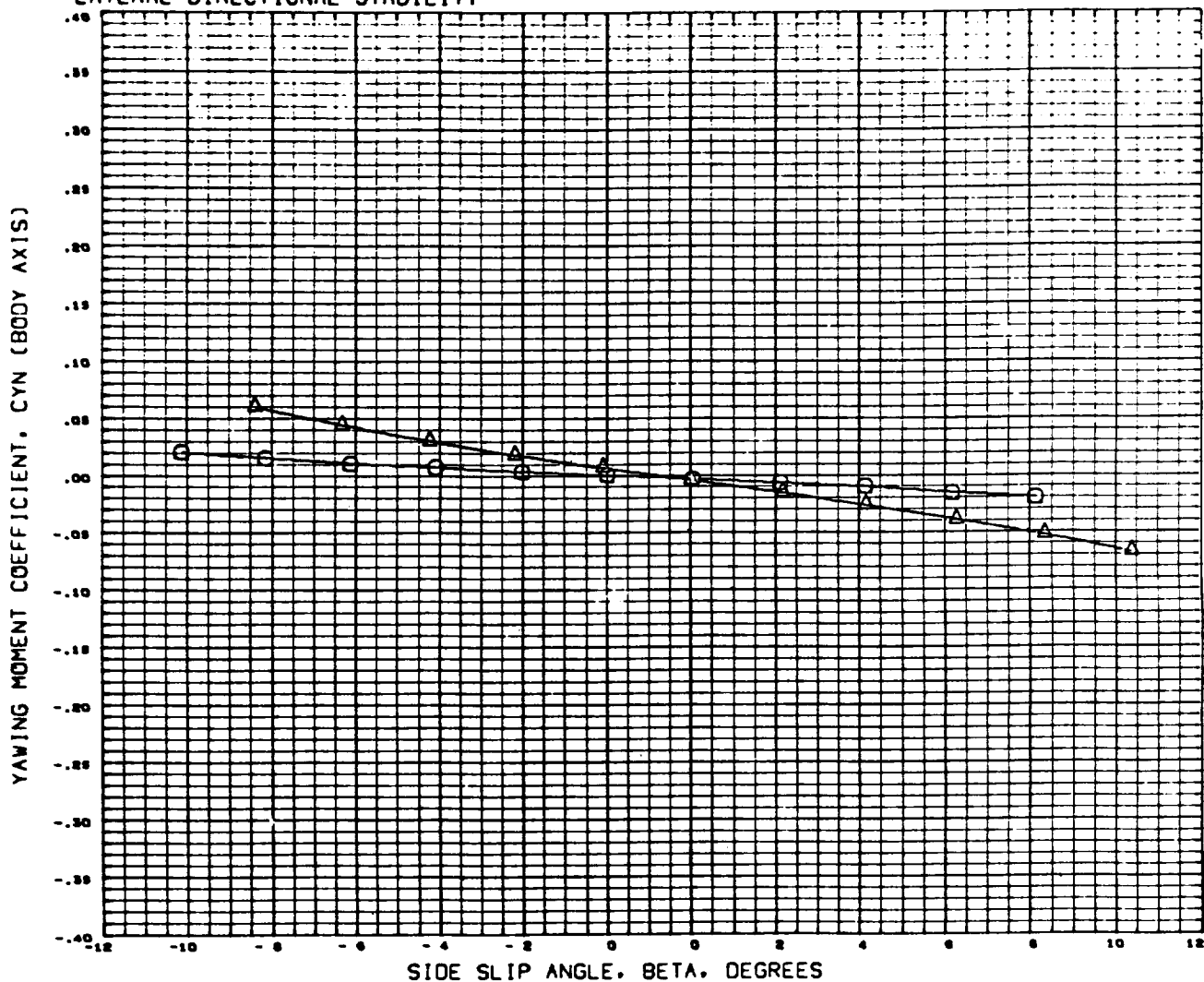


SYMBOL	MACH	PARAMETRIC VALUES			
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	1.946	DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREF	4.9327	SQ. IN.
LREF	1.8960	IN.
BREF	3.7200	IN.
YMRP	2.4000	IN.
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ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

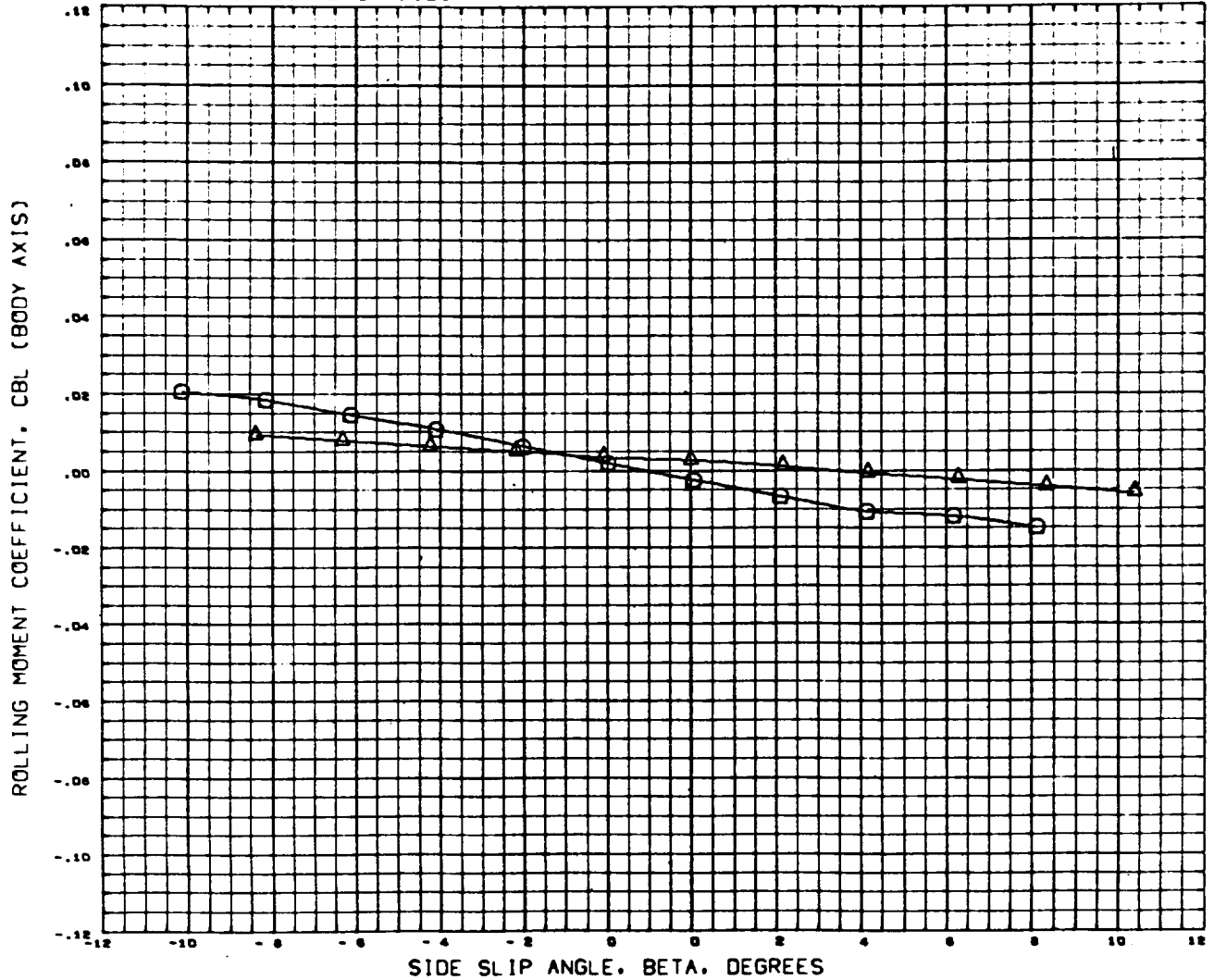


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR			
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	1.946	0.000	0.000	0.000		LREF	1.6960 IN.
						BREF	3.7200 IN.
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						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

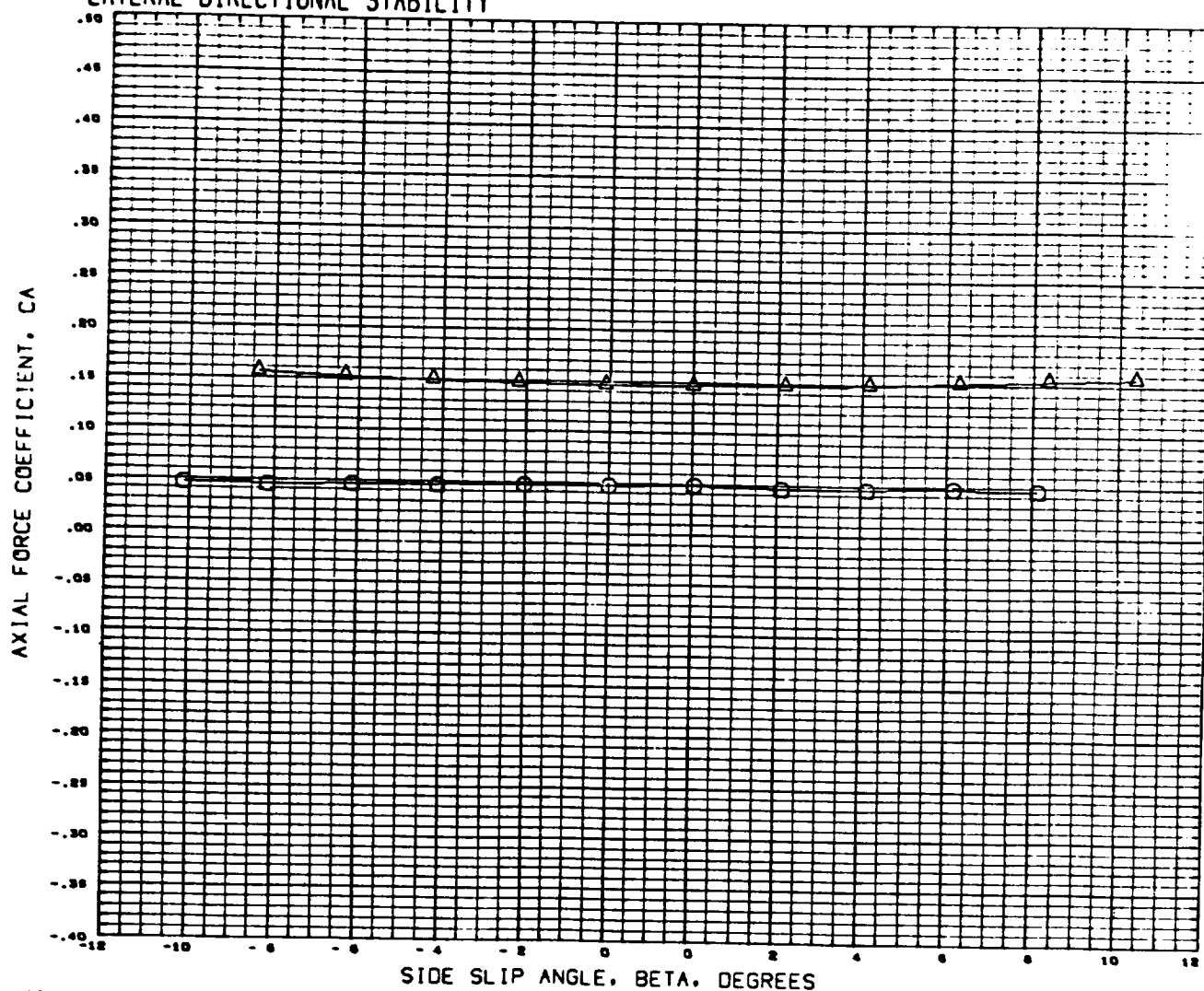
M496-MSFC AR11981-3 MODEL W4B2V2 (E3828F) 06 SEP 72 PAGE 168


LATERAL DIRECTIONAL STABILITY



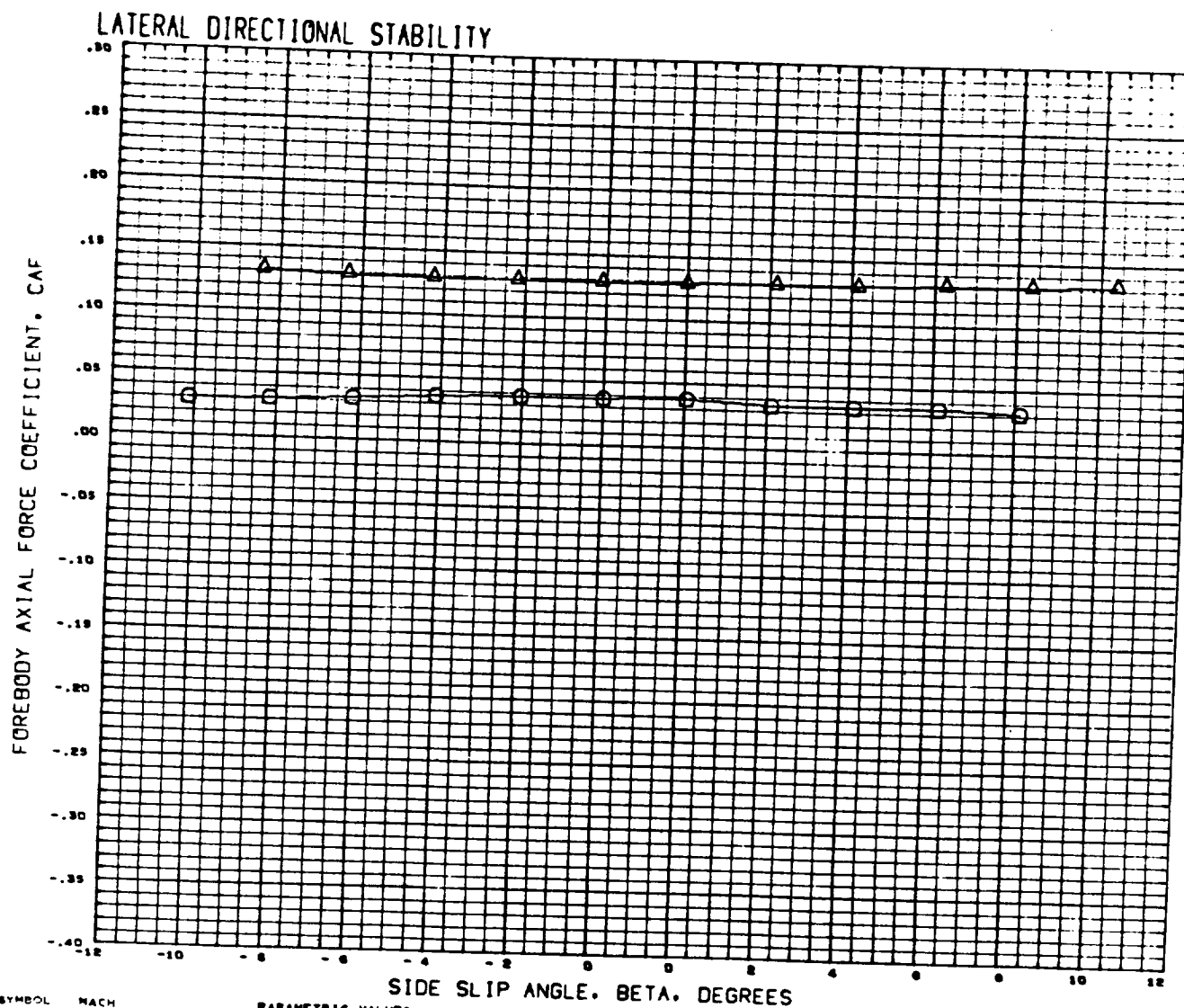
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○	△	0.003	ALPHA	0.000	DEL	0.000		BRF	4.9327	sq. in.
		1.946	DER	0.000	ELEVTR	0.000		LREF	1.8980	in.
			ATLROW	0.000				BRF	3.7200	in.
								XHRP	2.4000	in.
								YHRP	0.0000	in.
								ZHRP	0.0000	in.
								SCALE	0.0025	in.

LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
		0.603		ALPHA	0.000	DEL	0.000	SREF	4.9327	SQ. IN.	
		1.946		DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.	
				ATLRON	0.000			SREF	3.7200	IN.	
								XMRP	2.4000	IN.	
								YMRP	0.0000	IN.	
								ZMRP	0.0000	IN.	
								SCALE	0.0025		
				DATA HIST. CODE	=E						

DATA HIST. CODE *E
M496-MSFC AR11981-3 MODEL W482V2 (E3828F) 06 SEP 72 PAGE 170

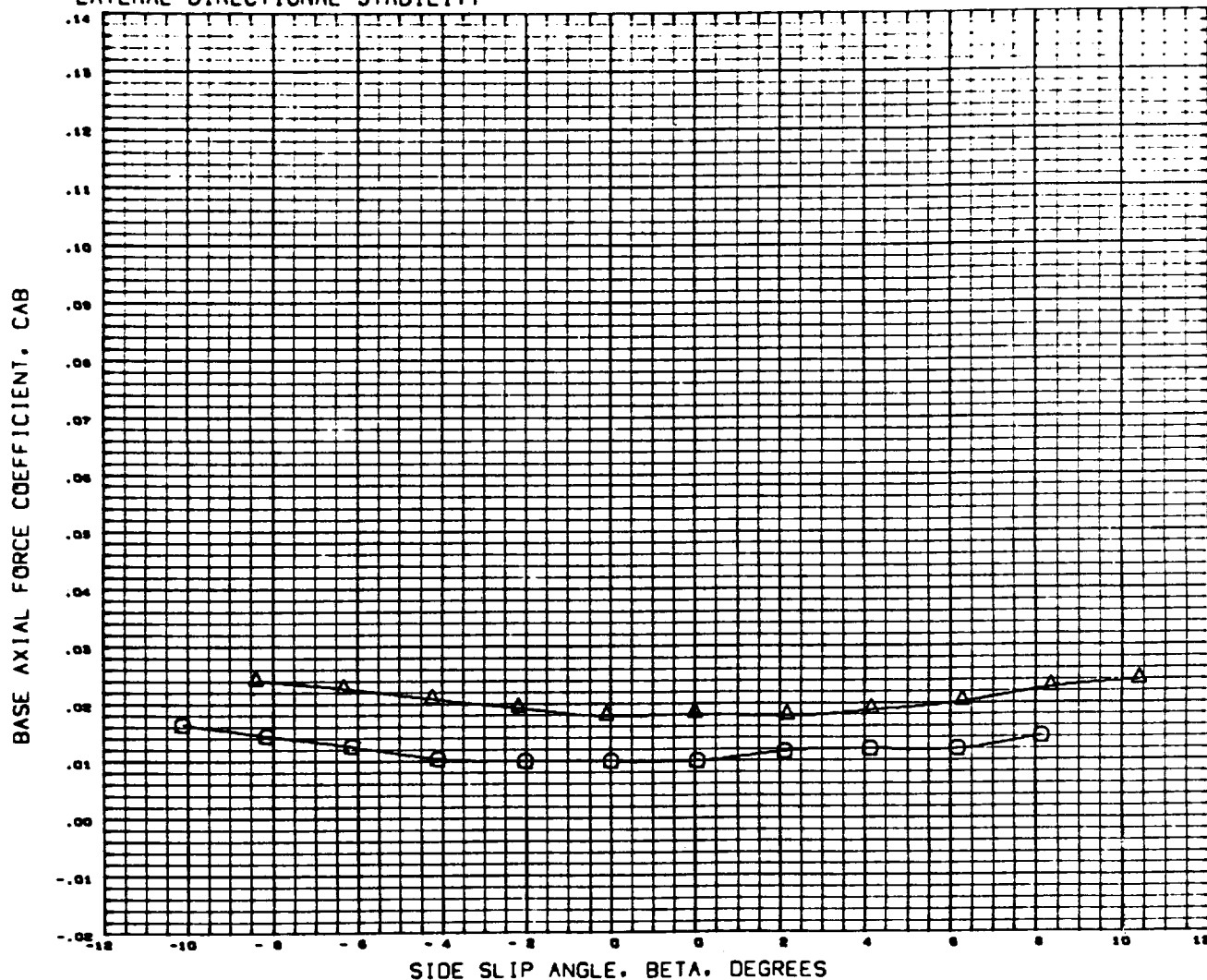


SYMBOL ○ △	NACH	PARAMETRIC VALUES			
	0.603	ALPHA	0.000	DEL	0.000
	1.946	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
BREF	4.9327	sq. in.
LREF	1.8980	in.
SRF	3.7200	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.803	ALPHA	0.000	DEL	0.000
△	1.946	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION	
SREF	4.9327 SQ. IN.
LREF	1.8980 IN.
BREF	3.7200 IN.
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YNRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

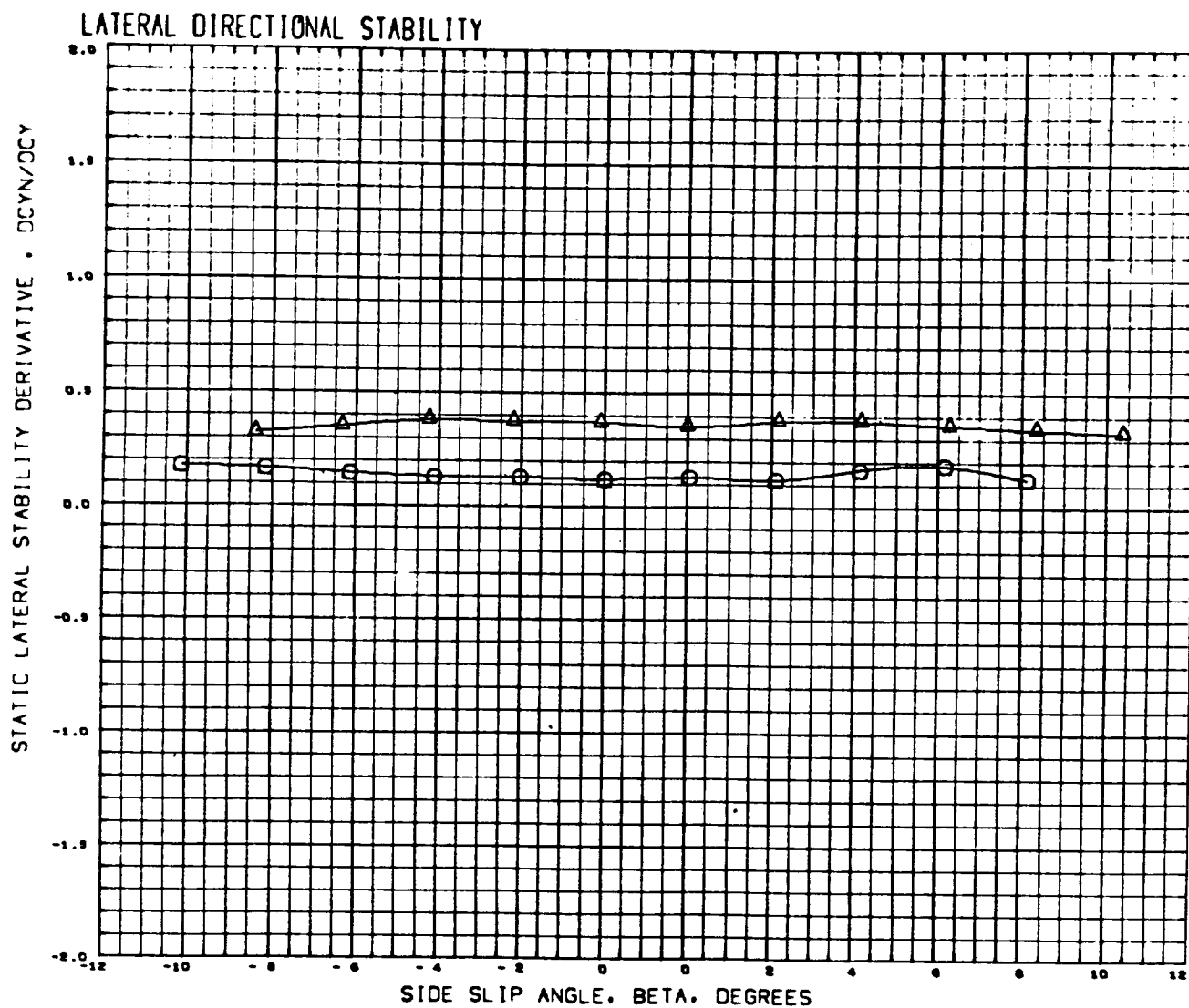
AR11981-3

MODEL

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SYMBOL	MACH	PARAMETRIC VALUES			
○	0.603	ALPHA	0.000	DEL	0.000
△	1.946	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SRP	4.9327	80. IN.
LRP	1.8980	IN.
ORP	3.7200	IN.
KNRP	2.4000	IN.
YNRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA MIST. CODE *E

M496-MSFC

AR1198I-3

MODEL

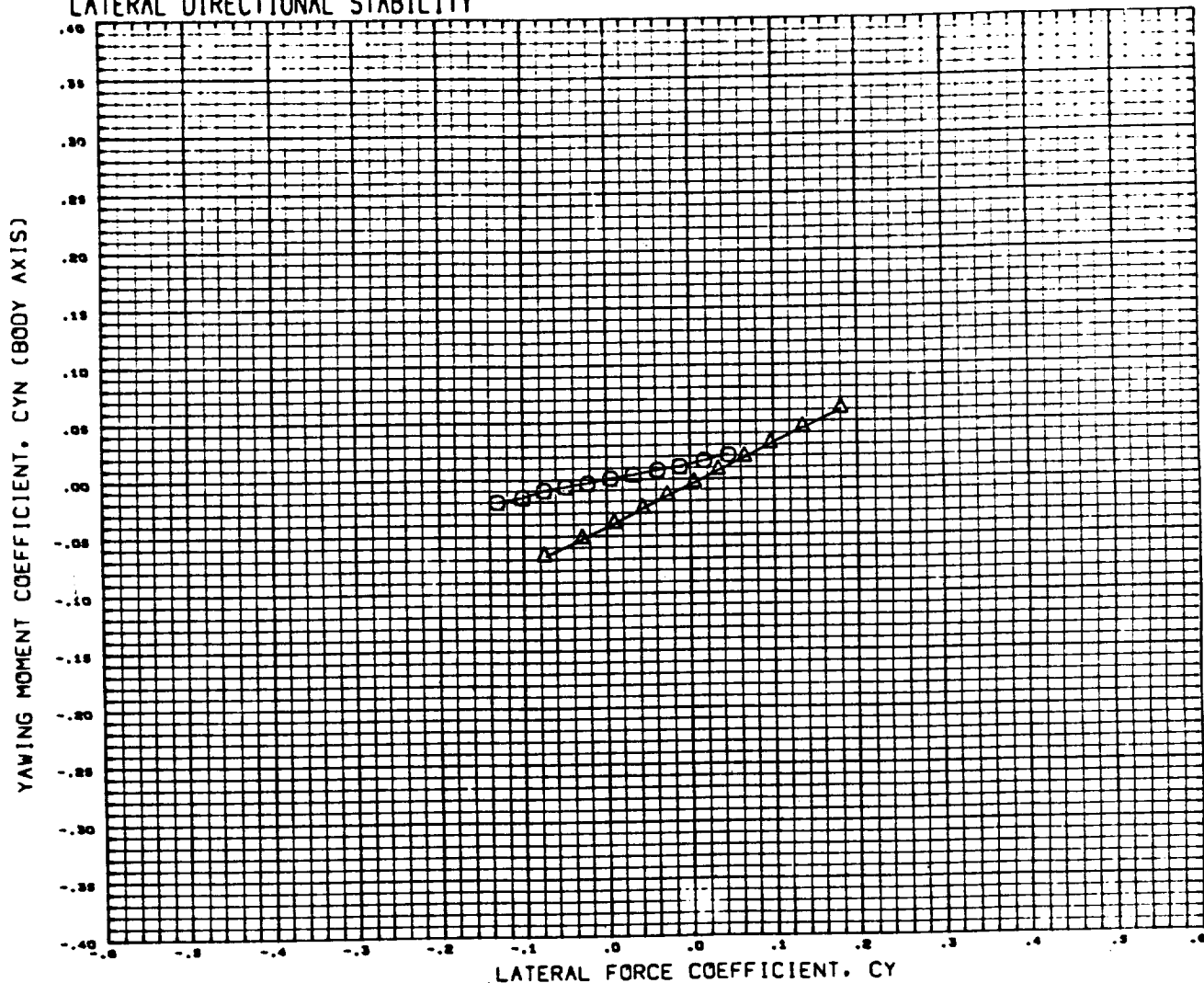
W4B2V2

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	
○	0.603	ALPHA 0.000	DEL 0.000
△	1.946	DER 0.000	ELEVTR 0.000
		AILRON 0.000	

REFERENCE INFORMATION		
SREF	4.9327	30. IN.
LREF	1.6960	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

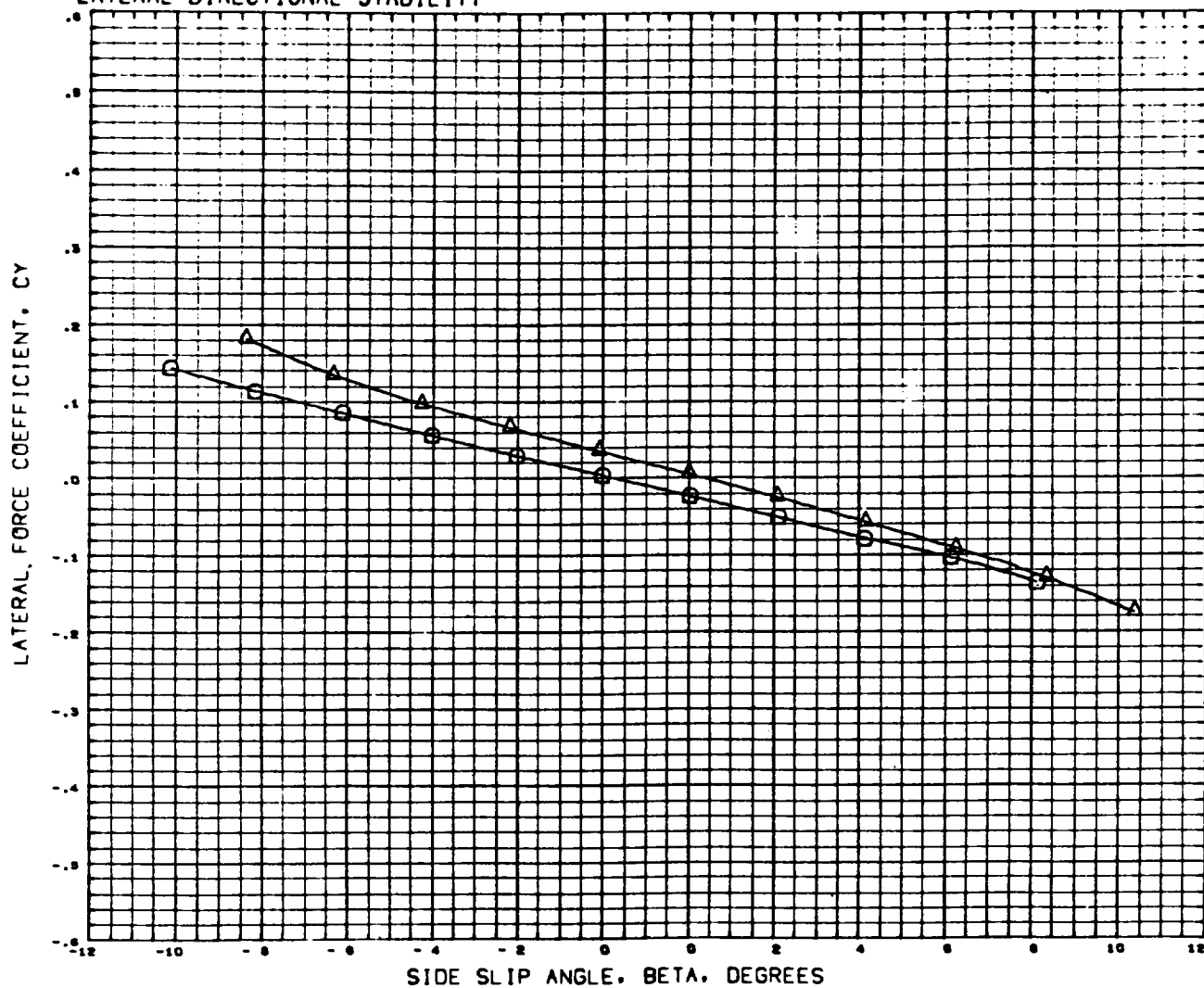
MODEL

W4B2V2

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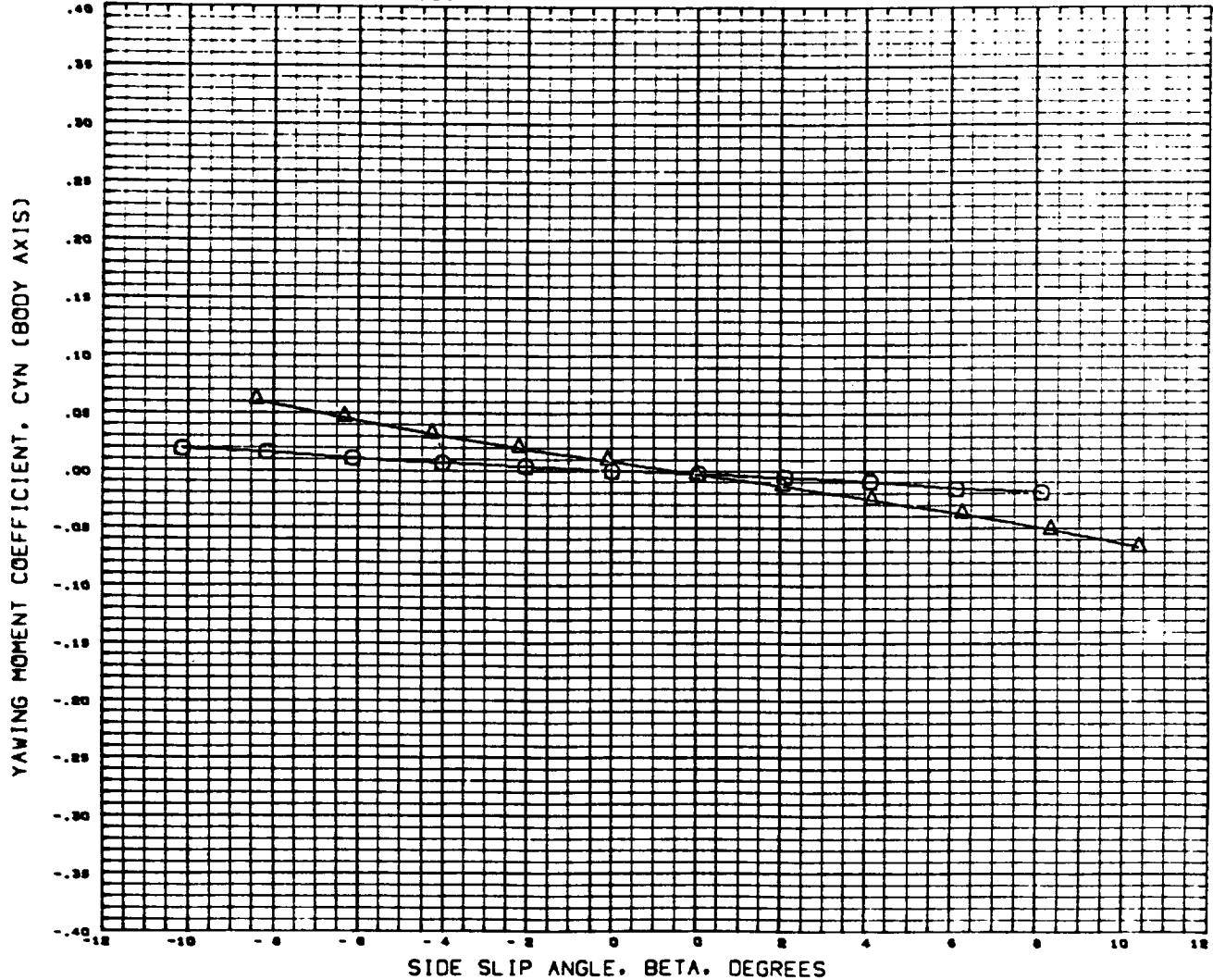
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	SREF	sq. in.
○	0.999	0.000	0.000	0.000	0.000	LREF	1.8980
△	1.948	0.000	0.000	0.000	0.000	SREF	3.7200
		ATLRGN	0.000	0.000	0.000	ZMRP	2.4000
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.999	ALPHA	0.000	DEL	0.000	SREF	4.9327	SQ. IN.
△	1.946	DER	0.000	ELEVTR	0.000	LREF	1.8960	IN.
		AILRON	0.000	CANARD	0.000	BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL
○
△

MACH
0.999
1.946

ALPHA
DER
ATLON

PARAMETRIC VALUES
0.000 DEL
0.000 ELEVTR
0.000 CANARD

0.000
0.000
0.000

REFERENCE INFORMATION

SREF	4.9327	80. IN.
LREF	1.8980	IN.
BREF	3.7200	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W4B2C12V2

(E3829F)

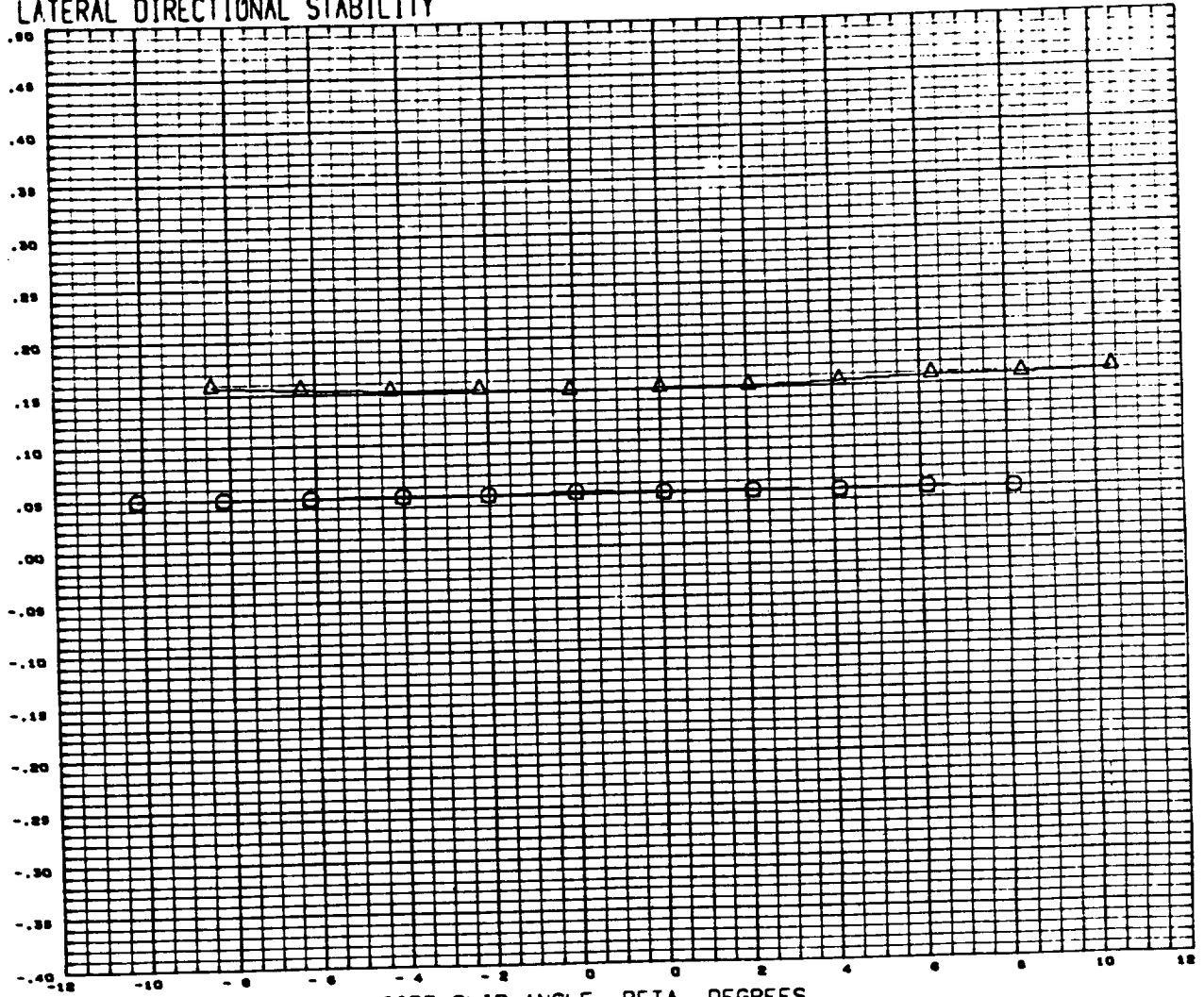
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PAGE

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LATERAL DIRECTIONAL STABILITY

AXIAL FORCE COEFFICIENT, CA



SYMBOL
△

MACH
0.599
1.948

ALPHA
0.000
0.000
0.000

PARAMETRIC VALUES
DEL 0.000
ELEVTR 0.000
CANARD 0.000

REFERENCE INFORMATION
SREP 4.9327 SQ. IN.
LREF 1.9580 IN.
BREF 3.7200 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

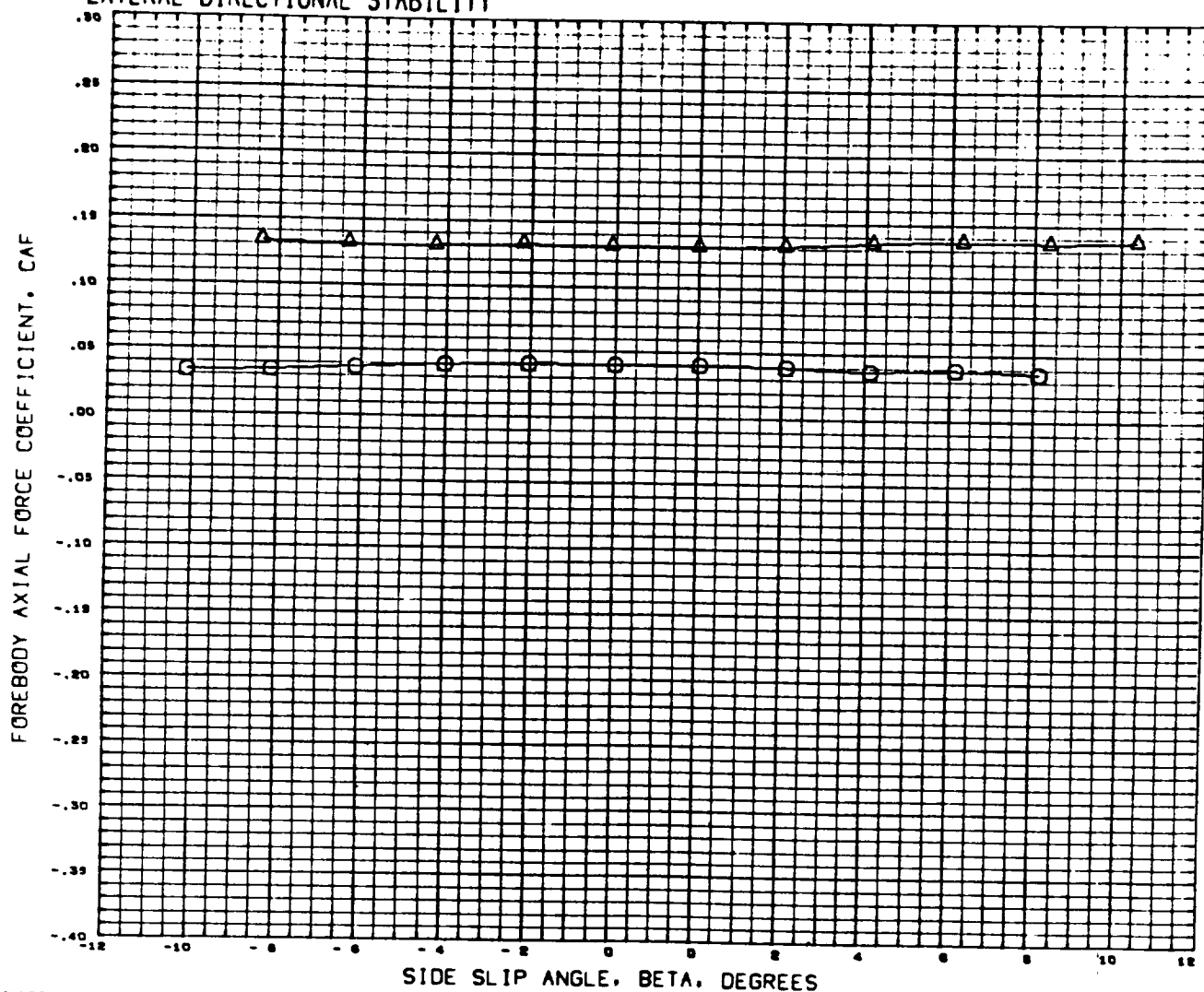
MODEL

W4B2C12V2

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LATERAL DIRECTIONAL STABILITY

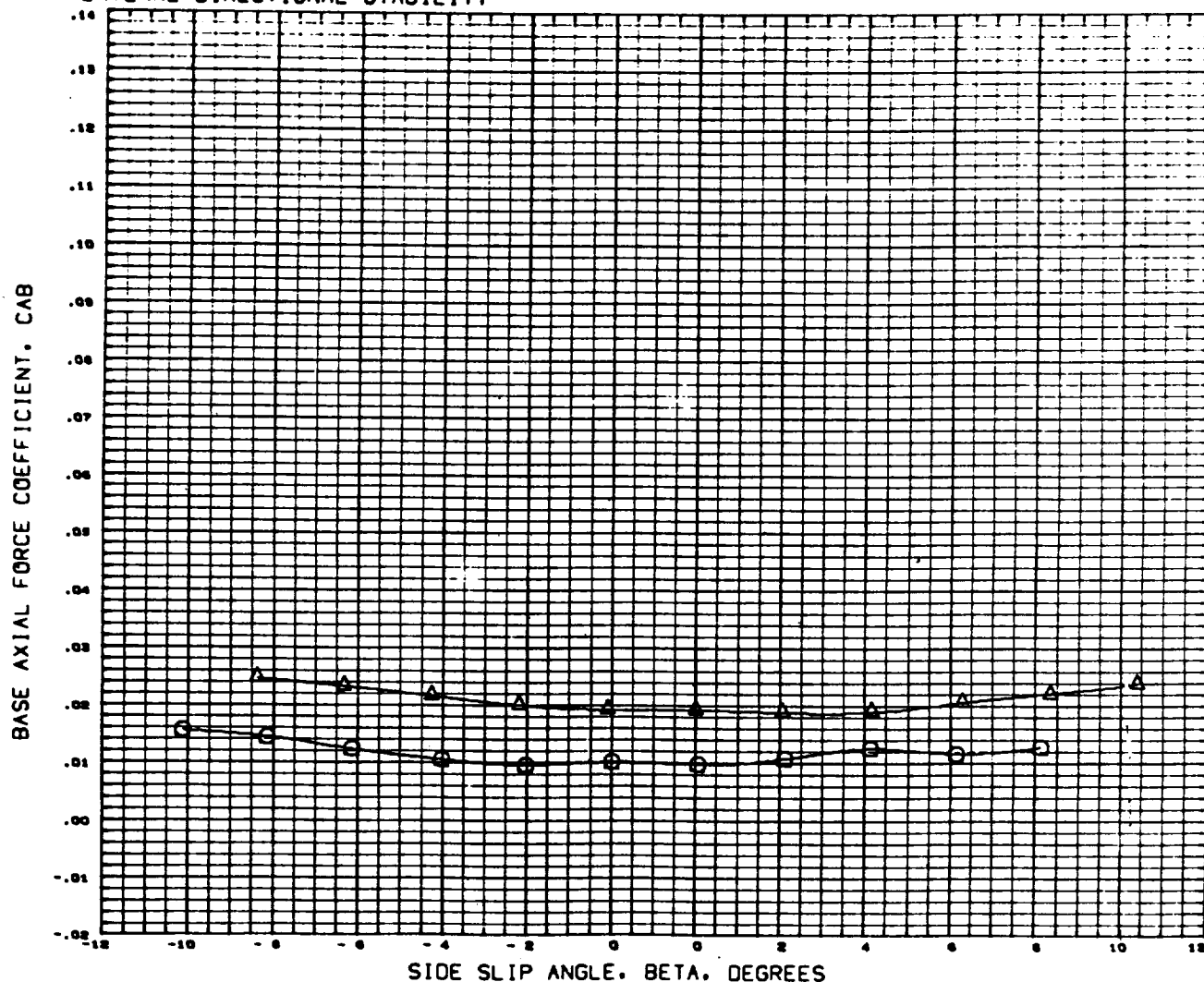


SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
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△	1.948	DER	0.000	ELEVTR	0.000	LREF	1.6980	IN.			
		ATLRON	0.000	CANARD	0.000	BREF	3.7200	IN.			
						ZMRP	2.4000	IN.			
						YMRP	0.0000	IN.			
						ZMRP	0.0000	IN.			
						SCALE	0.0025				

DATA MIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

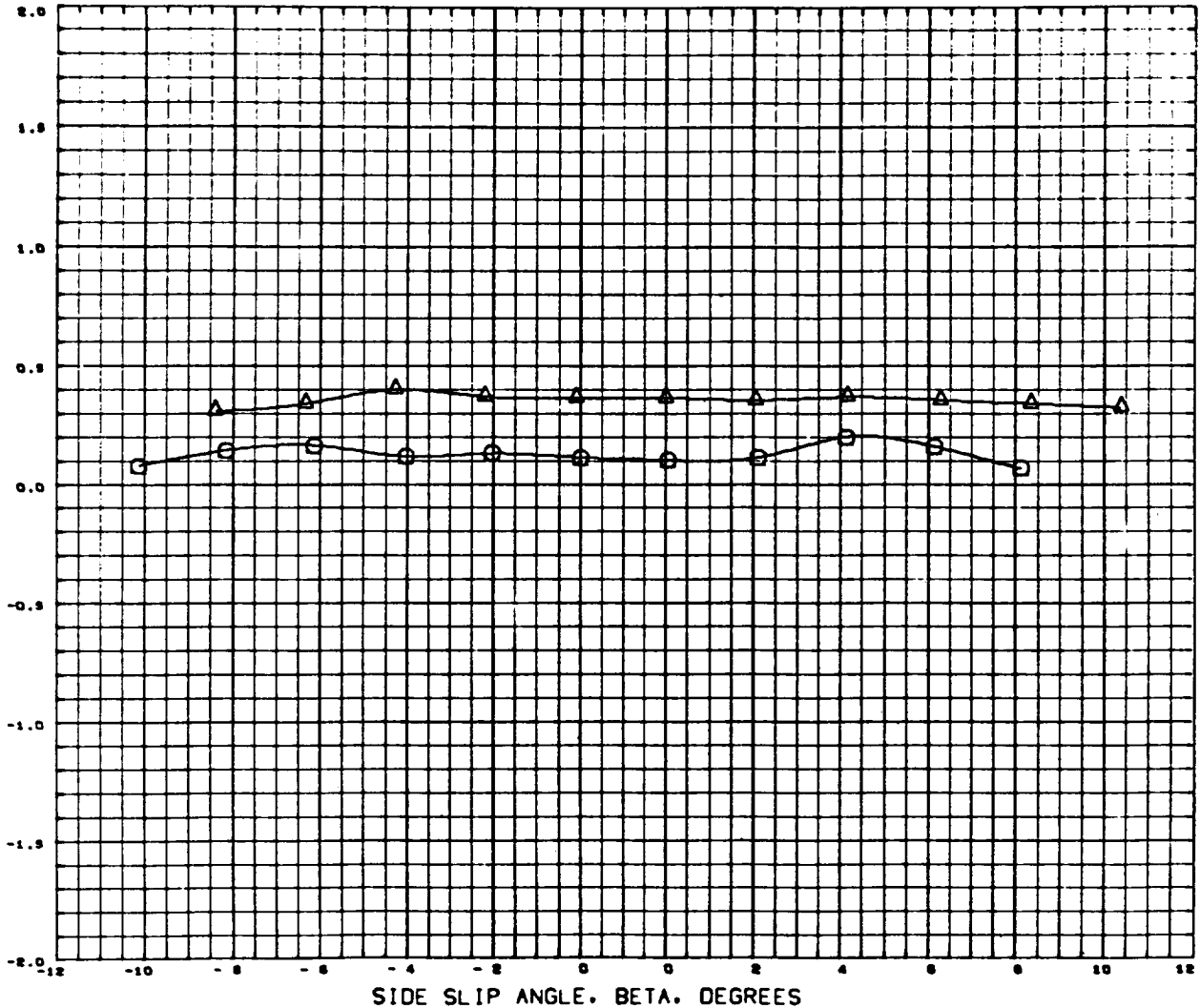


SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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	1.948	DER 0.000 ELEVTR 0.000	LREF 1.8980 IN.
		ATLROM 0.000 CANARD 0.000	BREF 3.7200 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY

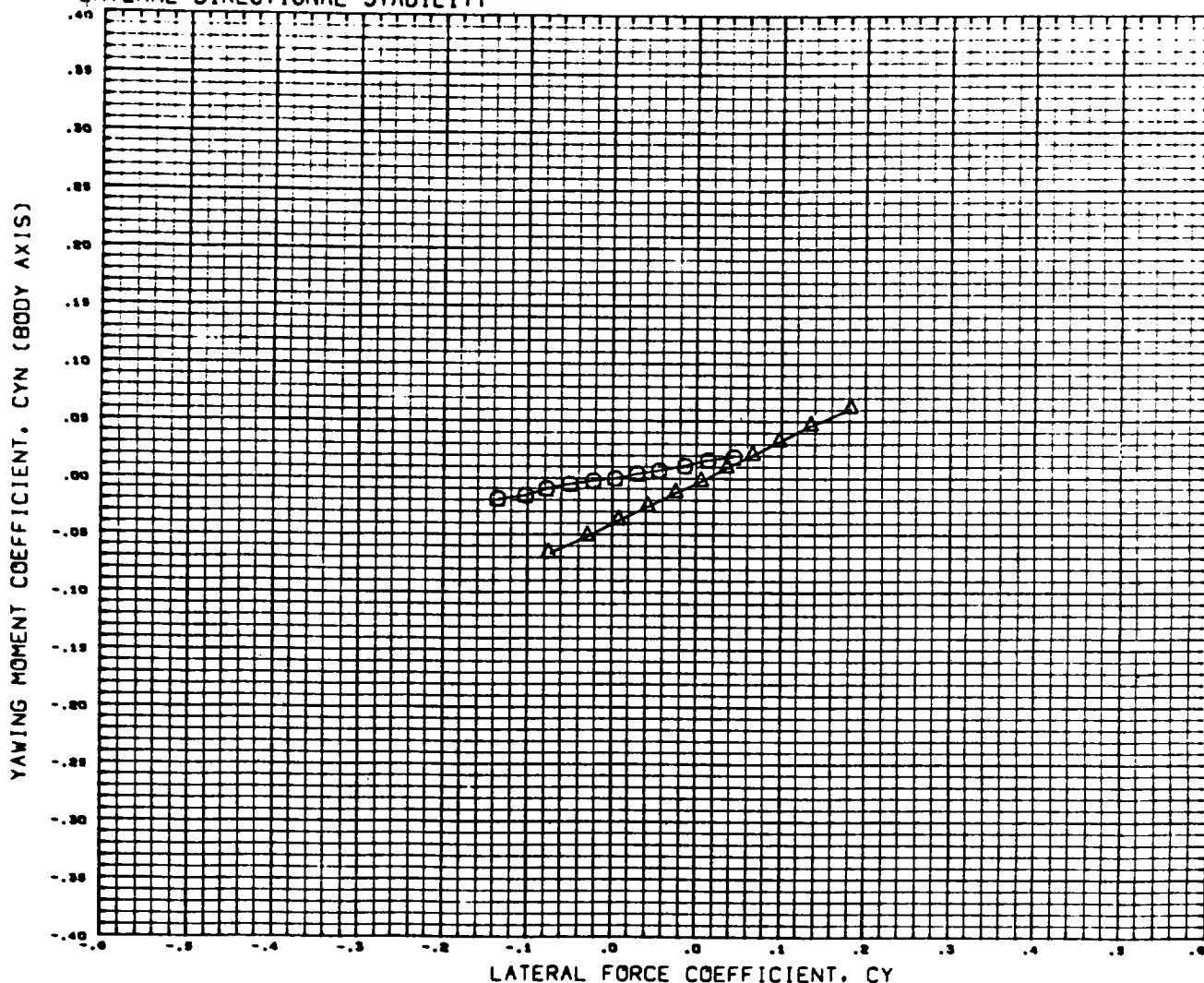


SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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	1.948	DER	0.000	ELEVTR	0.000	LREF	1.8980	in.
		ATLRON	0.000	CANARD	0.000	BREF	3.7200	in.
						XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0025	in.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



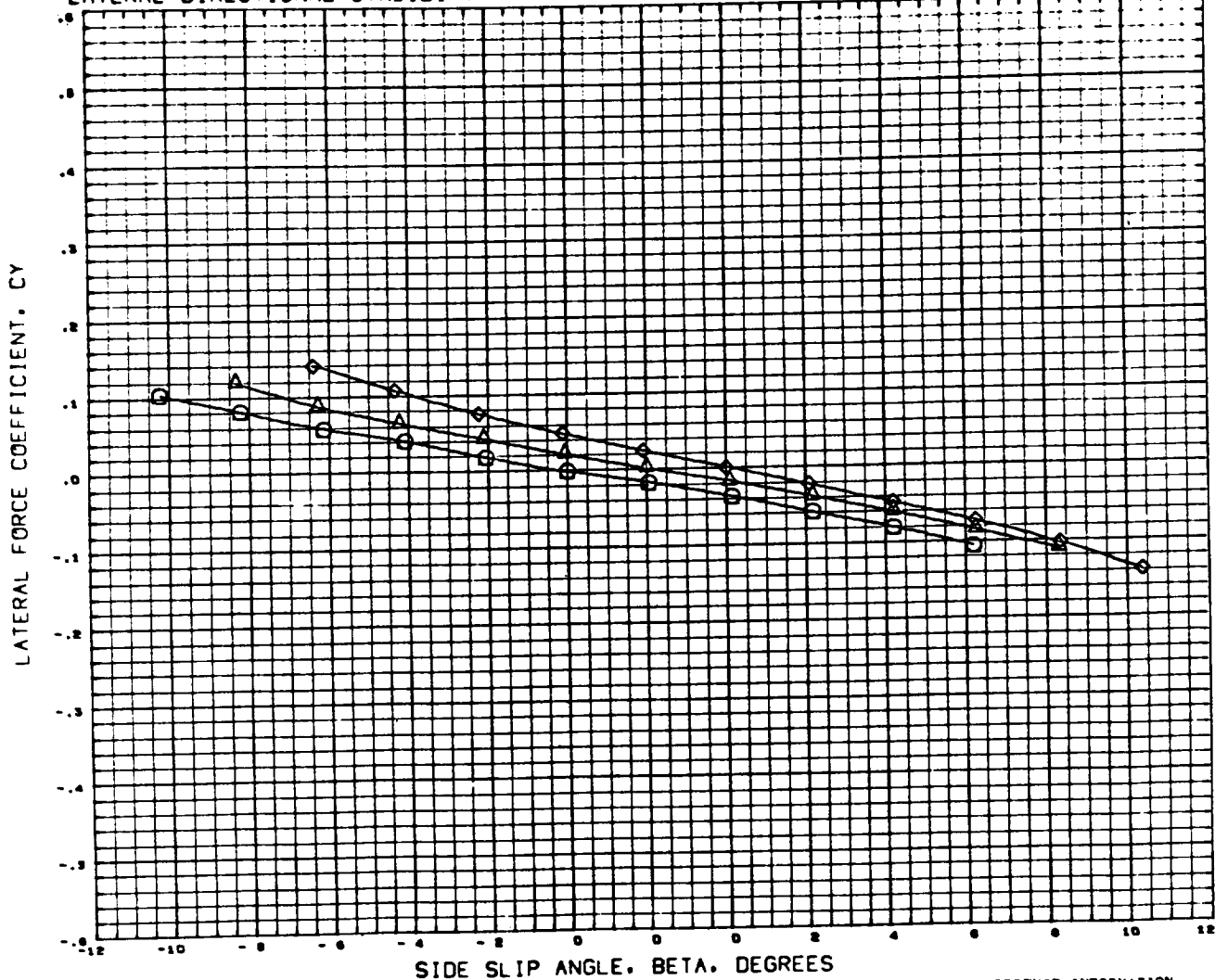
SYMBOL Δ \bigcirc MACH 0.599 1.946
 PARAMETRIC VALUES
 ALPHA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.8960 IN.
 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

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LATERAL DIRECTIONAL STABILITY



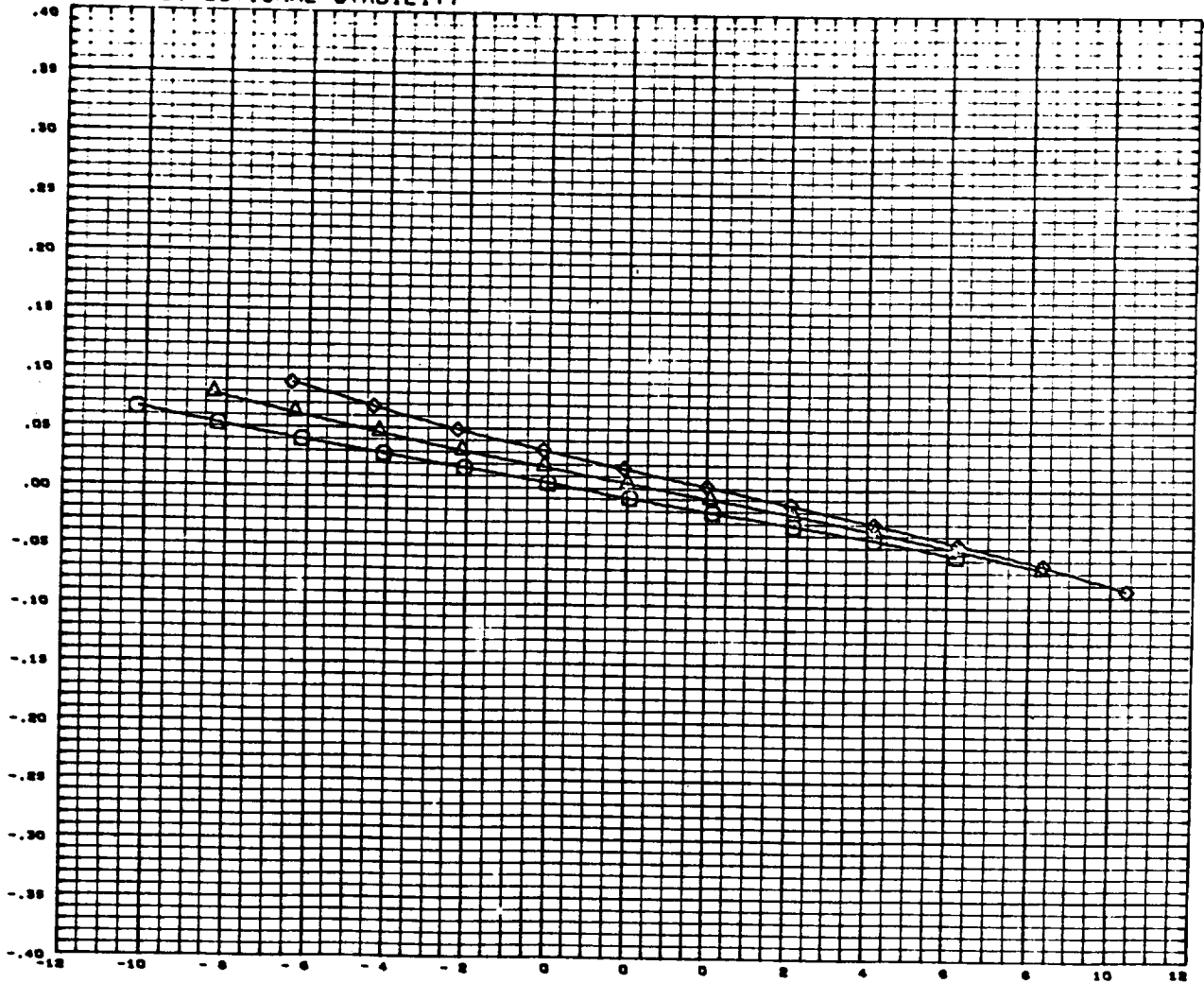
SYMBOL	MACH	PARAMETRIC VALUES
○	0.998	ALPHA 10.000 DEL 0.000
△	0.998	DER 0.000 ELEVTR 0.000
◇	1.196	AILRON 0.000

REFERENCE INFORMATION	
SREF	4.0225 50. IN.
LREF	1.5560 IN.
BREF	4.3000 IN.
YNRP	2.4000 IN.
YNRP	0.0000 IN.
YNRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES
○	0.998	ALPHA 10.000 DEL 0.000
△	0.996	DER 0.000 ELEVTR 0.000
◇	1.196	ATLRON 0.000

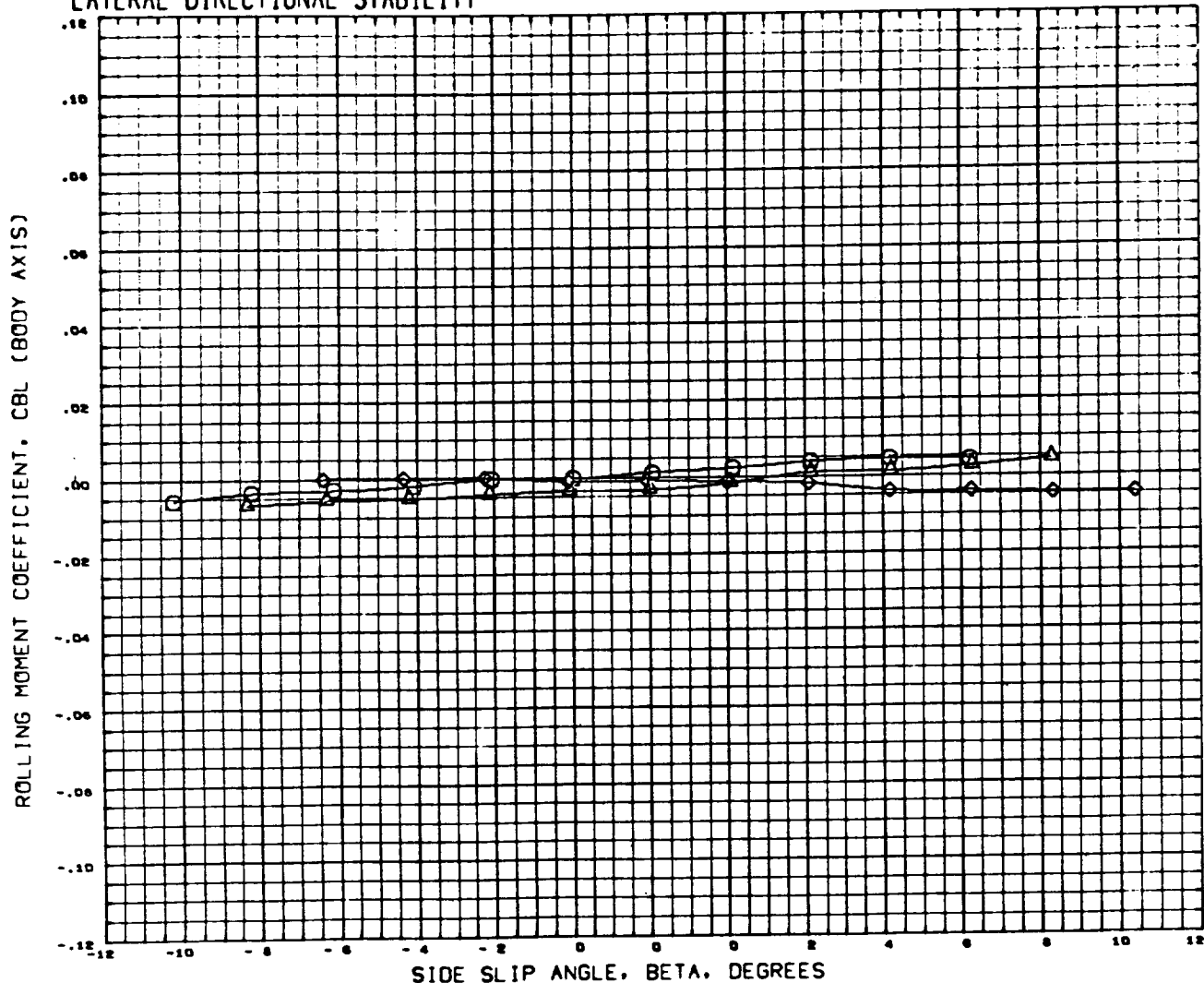
REFERENCE INFORMATION		
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XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	DEL	SRF	LRP	SR
○	0.598	10.000	0.000	0.000	0.000	4.6225	1.3360	50. IN.
△	0.896	0.000	0.000	0.000	0.000	4.3000	2.4000	IN.
◇	1.196	0.000	0.000	0.000	0.000	0.0000	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W682

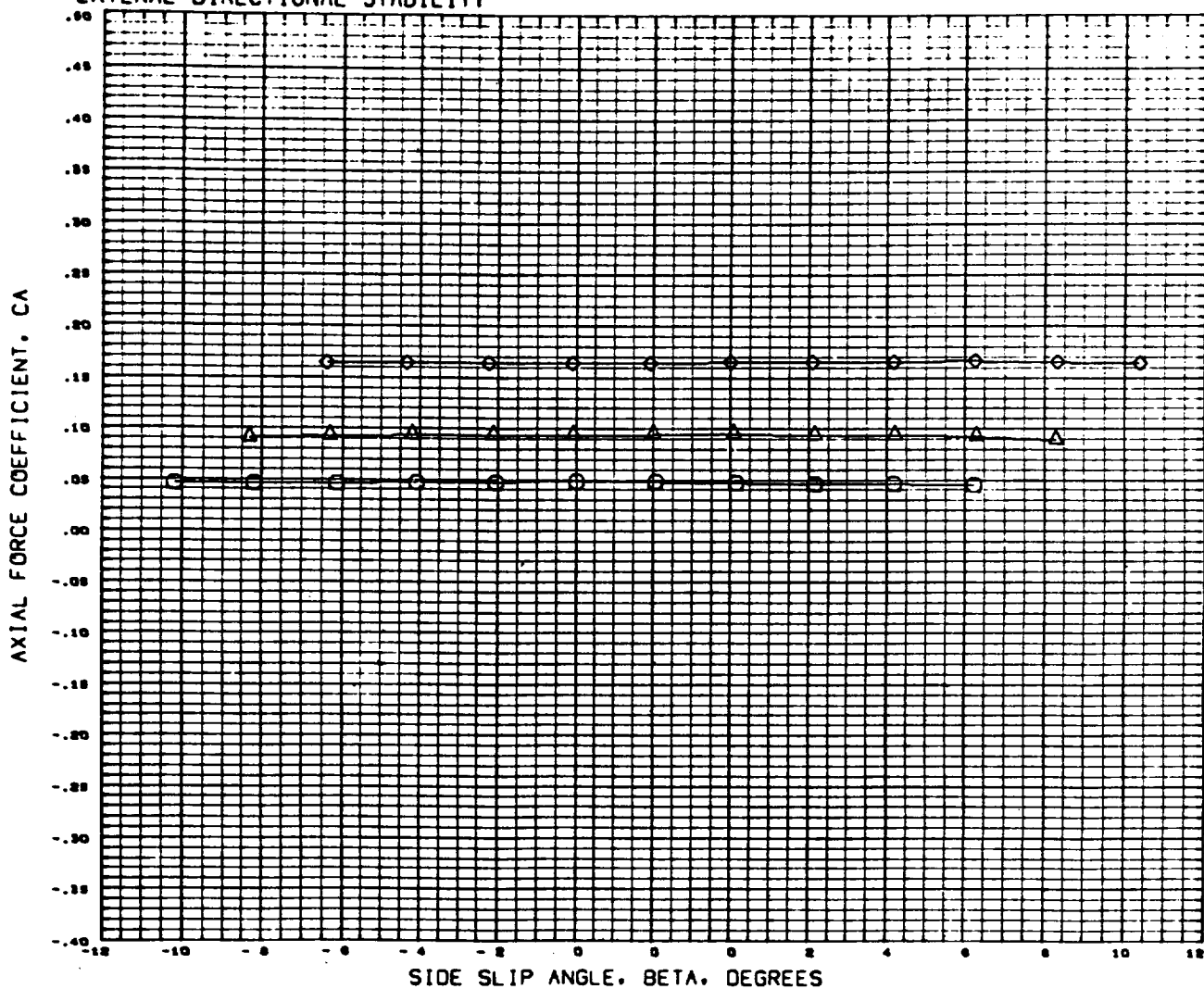
(E3806G)

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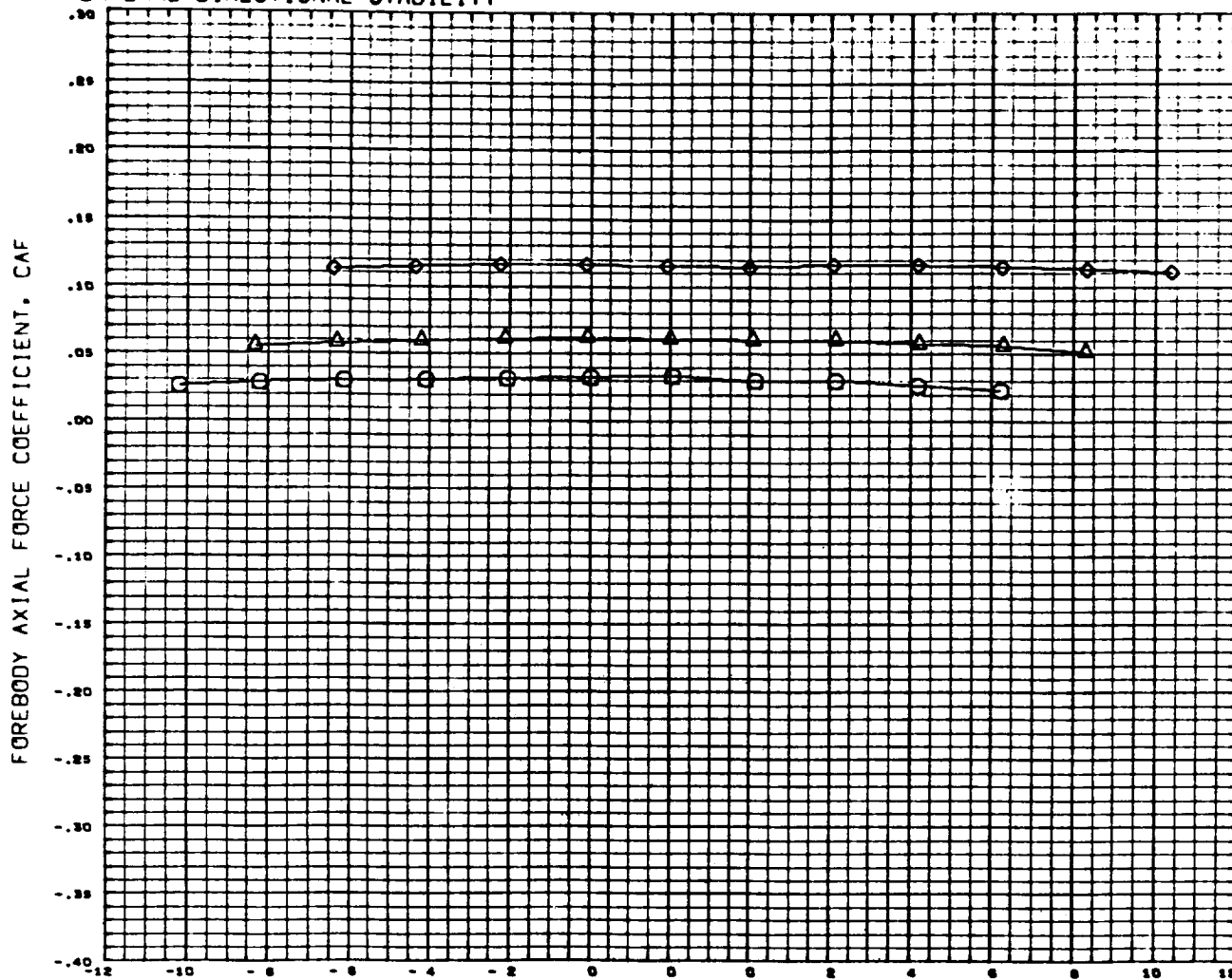
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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△	0.698	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	1.198	AILRON 0.000	SREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION	
○	MACH	0.998	ALPHA	10.000	DEL	0.000	
△	0.998	DER	0.000	ELEVTR	0.000	SRP	4.6225 50. IN.
◇	1.196	ATLRON	0.000			LRP	1.5360 IN.
						SRP	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W6B2

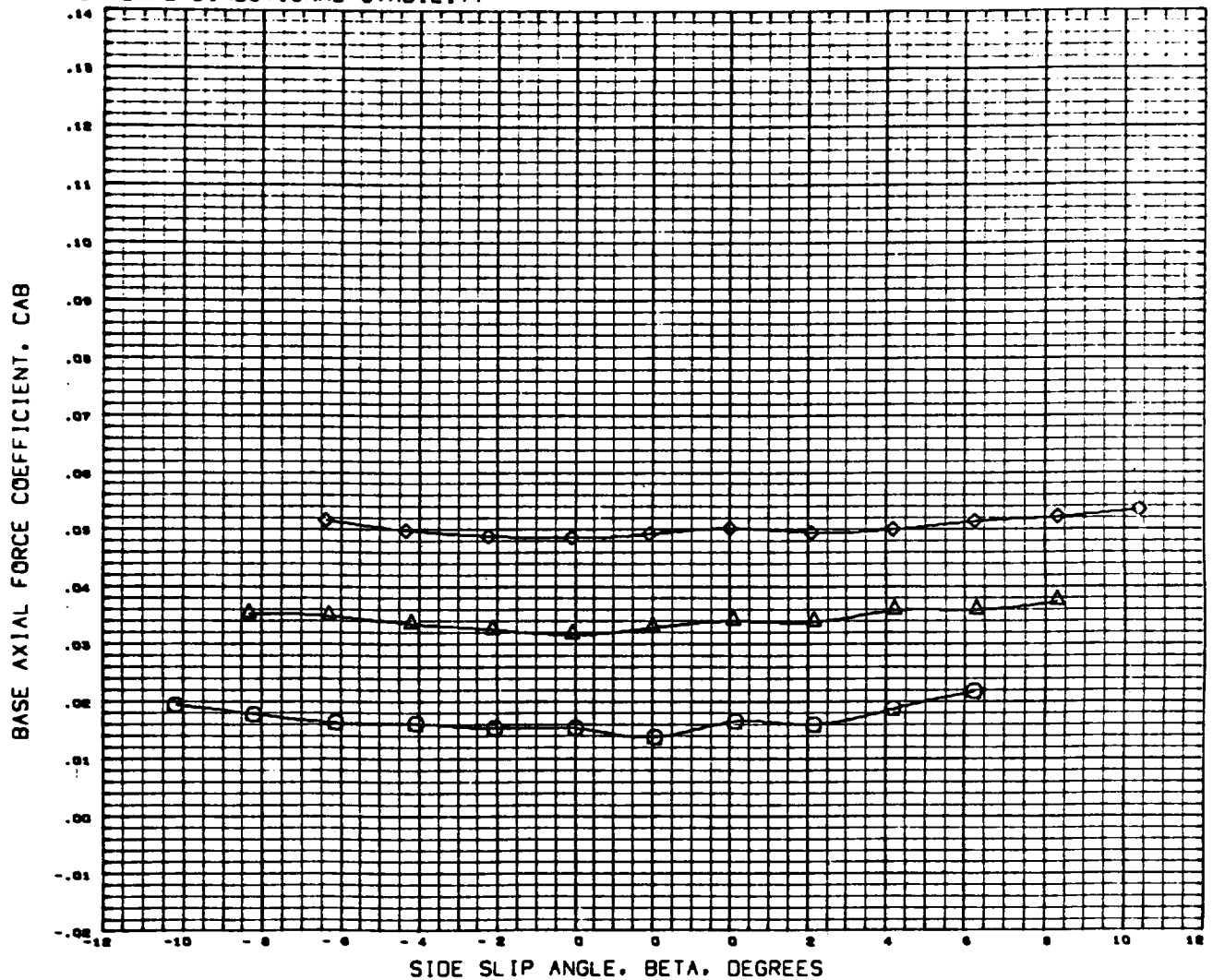
(E3806G)

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.598	ALPHA 10.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	0.996	DER 0.000 ELEVTR 0.000	LREF 1.9360 IN.
◇	1.196	ATLRON 0.000	BREF 4.3000 IN.
			XHRP 2.4000 IN.
			YHRP 0.0000 IN.
			ZHRP 0.0000 IN.
			SCALE 0.0025 IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES
○	0.598	ALPHA 10.000 DEL 0.000
△	0.896	DER 0.000 ELEVTR 0.000
◇	1.196	AILRON 0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
YNRP	2.4000	IN.
YNRP	0.0000	IN.
YNRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

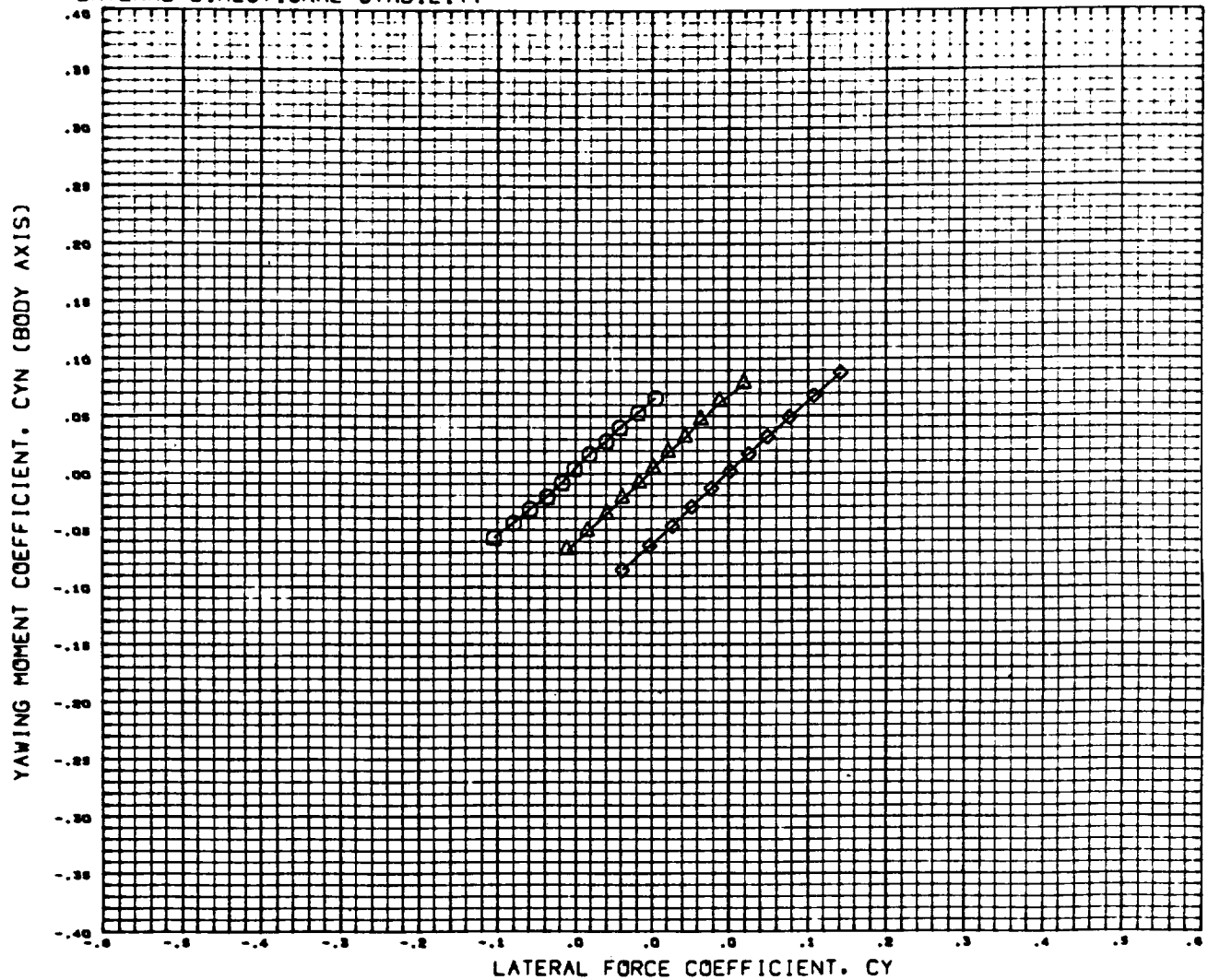
MODEL

W6B2

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LATERAL DIRECTIONAL STABILITY



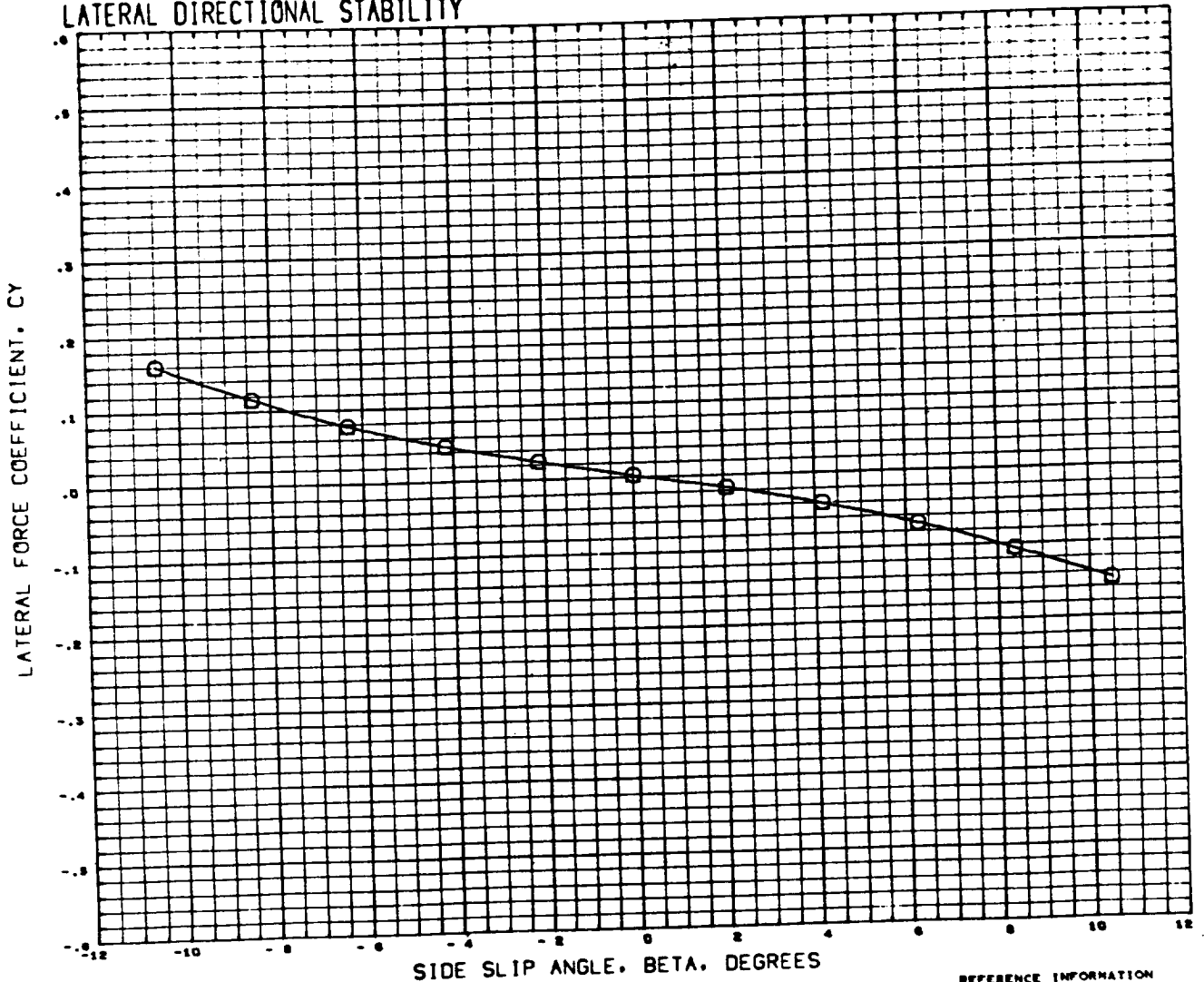
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.596	ALPHA	10.000	DEL	0.000
△	0.896	DER	0.000	ELEVTR	0.000
◇	1.196	AILRON	0.000		

REFERENCE INFORMATION		
SREF	4.6225	sq.in.
LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL MACH
○ 1.959

PARAMETRIC VALUES
ALPHA 10.000 DEL 0.000
DER 0.000 ELEVTR 0.000
AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.9560 IN.
BREF 4.3000 IN.
ZMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

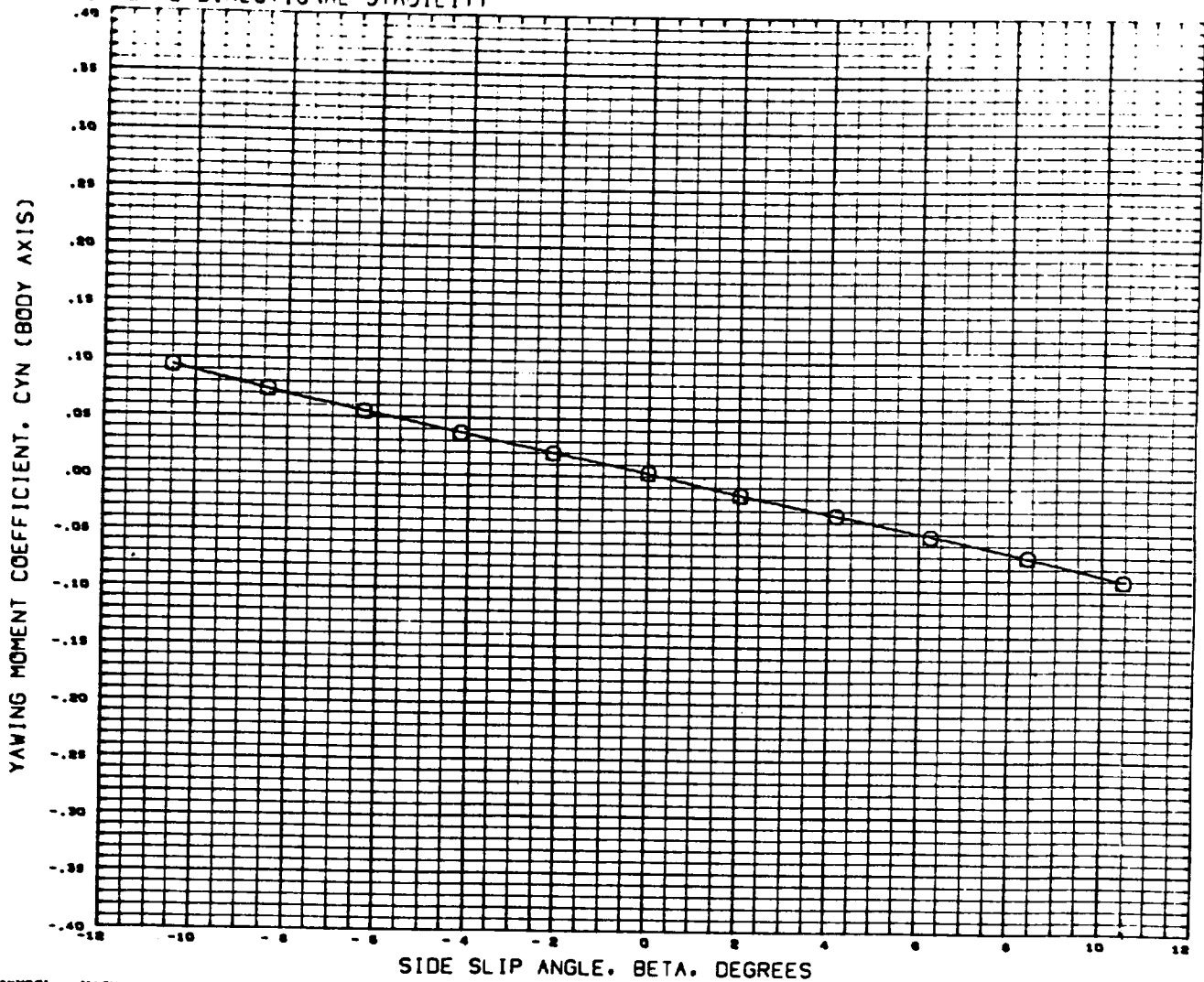
MODEL

W6B2C12

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LATERAL DIRECTIONAL STABILITY



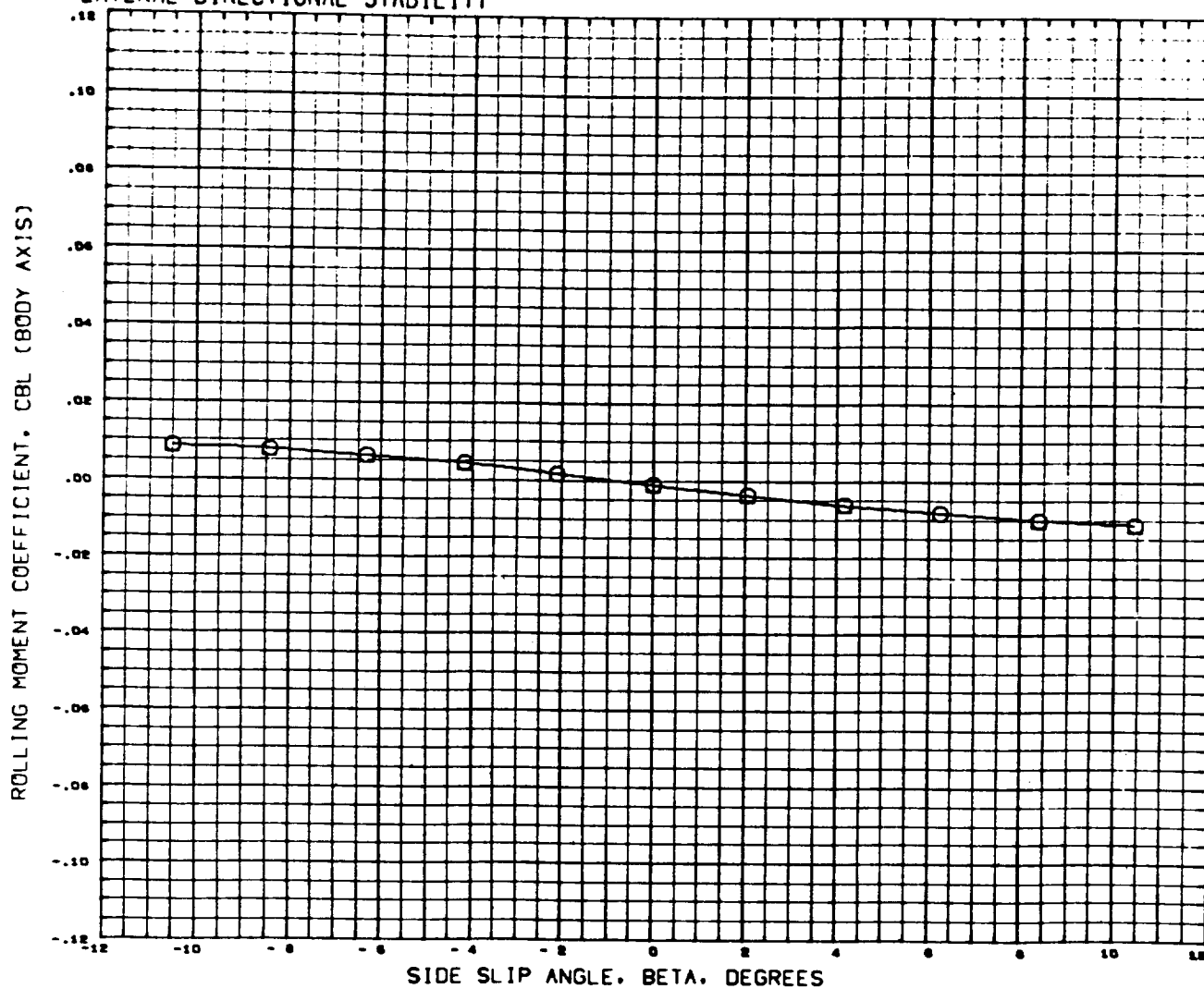
SYMBOL	MACH	PARAMETRIC VALUES			
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		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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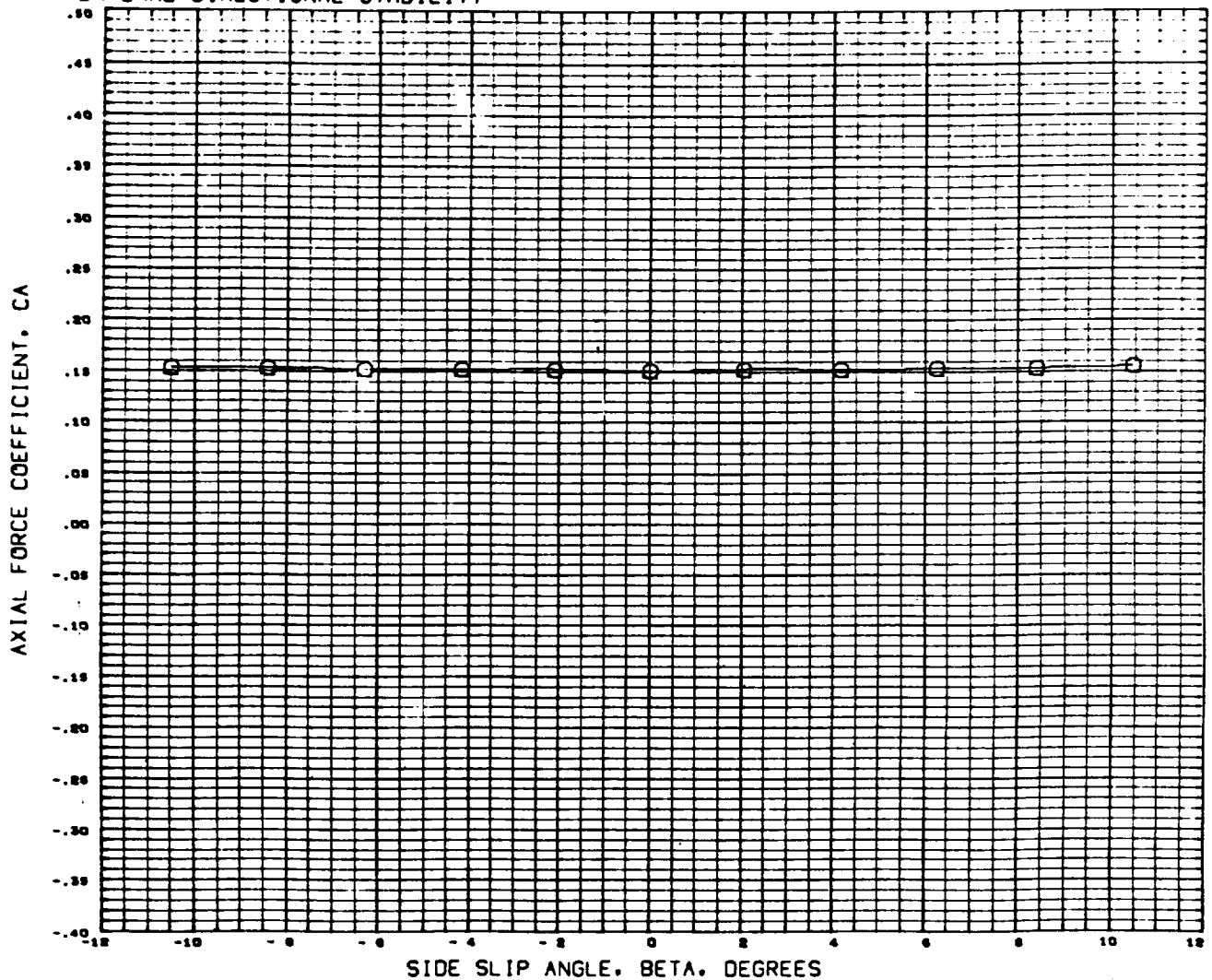
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LRFP	1.5360	IN.
		AILRON	0.000	CANARD	0.000	BRFP	4.3000	IN.
						XRFP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



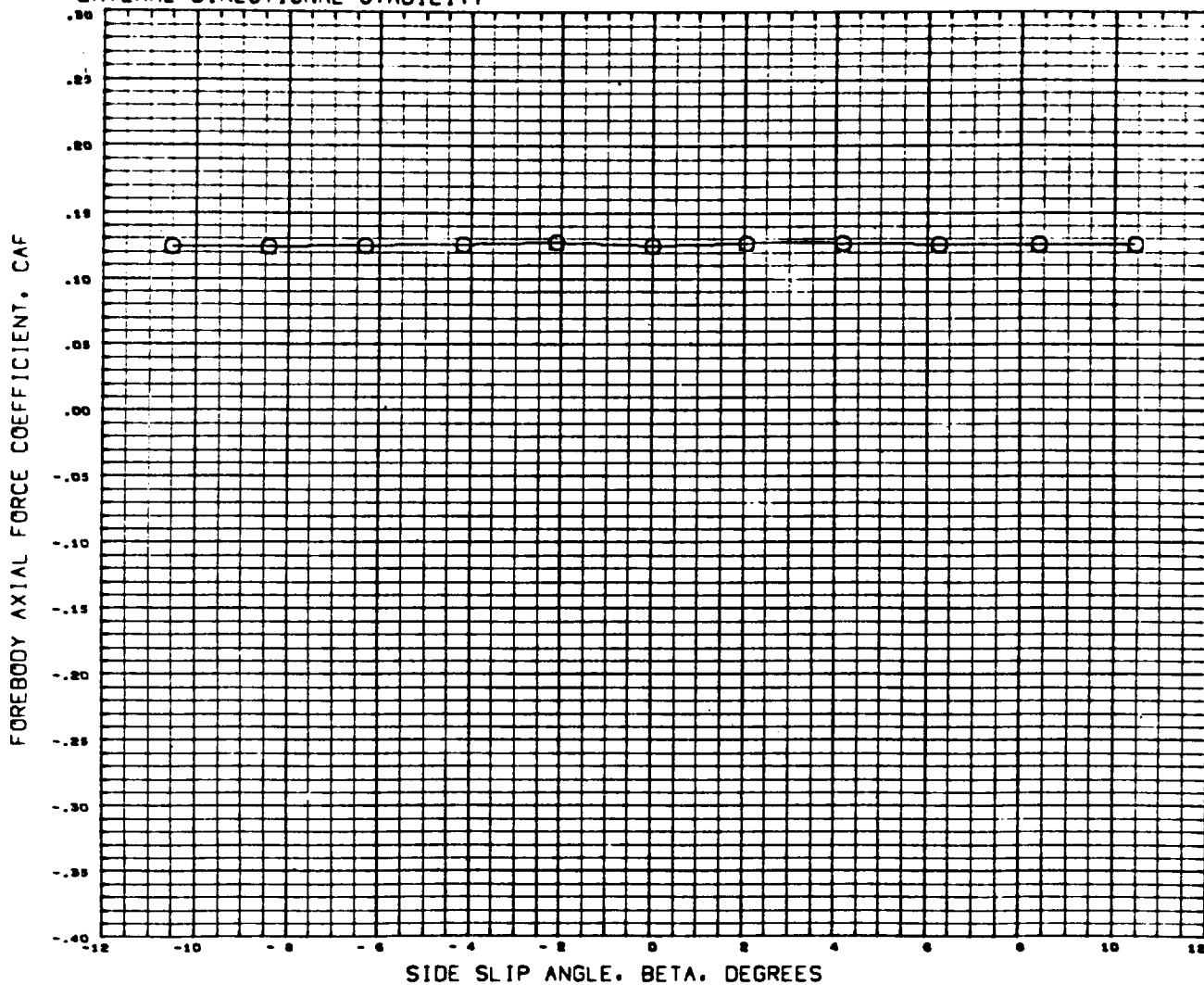
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.959	ALPHA	10.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.8225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE #E

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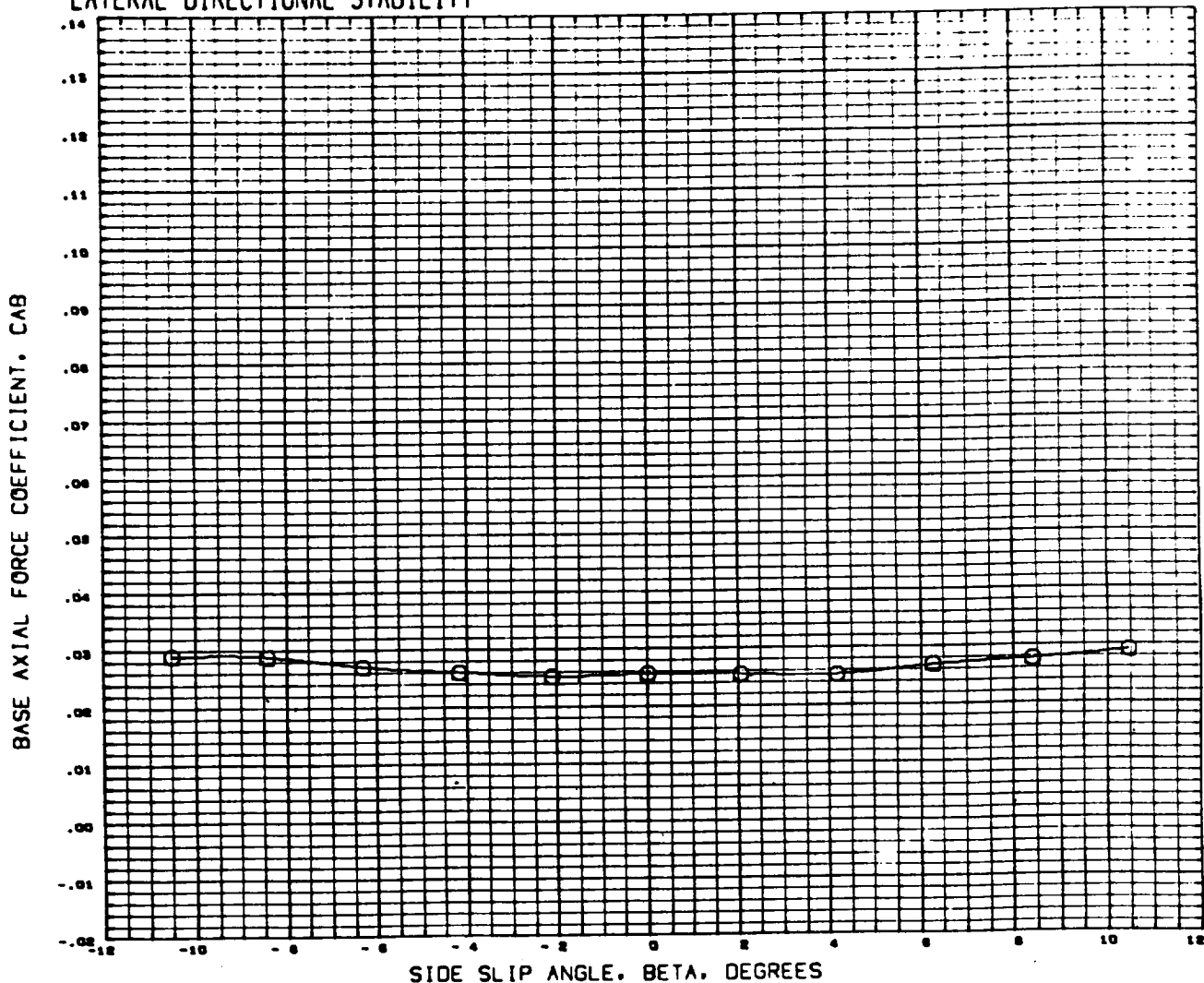
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.959	ALPHA	10.000	DEL	0.000	BREF	4.6225	80. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						YHRP	8.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	

M496-MSFC	AR11981-3	MODEL	W6B2C12	(E3813G)	06 SEP 72	PAGE	195
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LATERAL DIRECTIONAL STABILITY

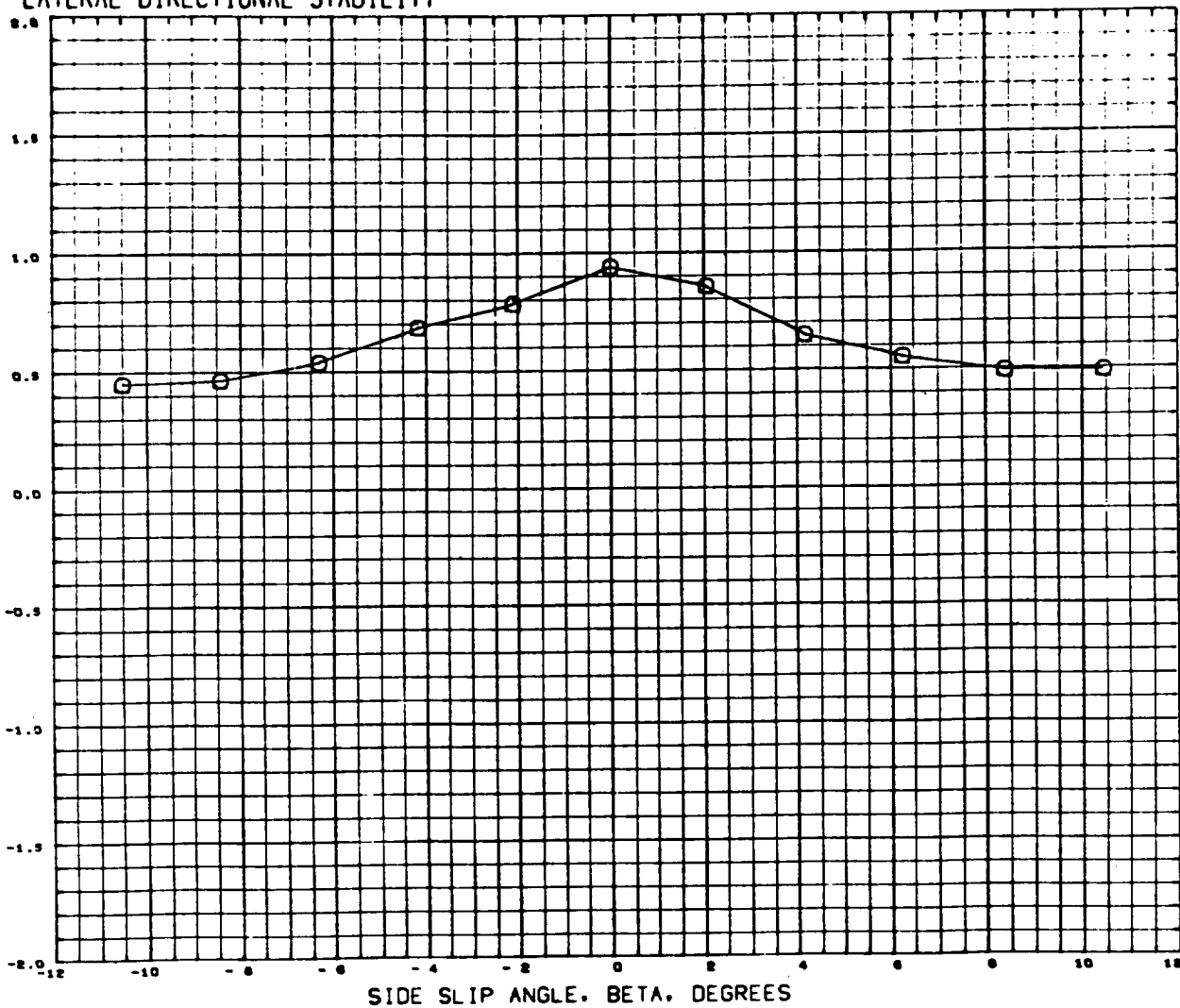


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	DEL	DEL	SREF	4.6225	50. IN.
○	1.959	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						XHRP	2.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SYMBOL MACH
○ 1.959

PARAMETRIC VALUES
ALPHA 10.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATTIRON 0.000 CANARD 0.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XWRP 2.4000 IN.
YWRP 0.0000 IN.
ZWRP 0.0000 IN.
SCALE 0.0023

DATA HIST. CODE *E

M496-MSFC

AR11981-3

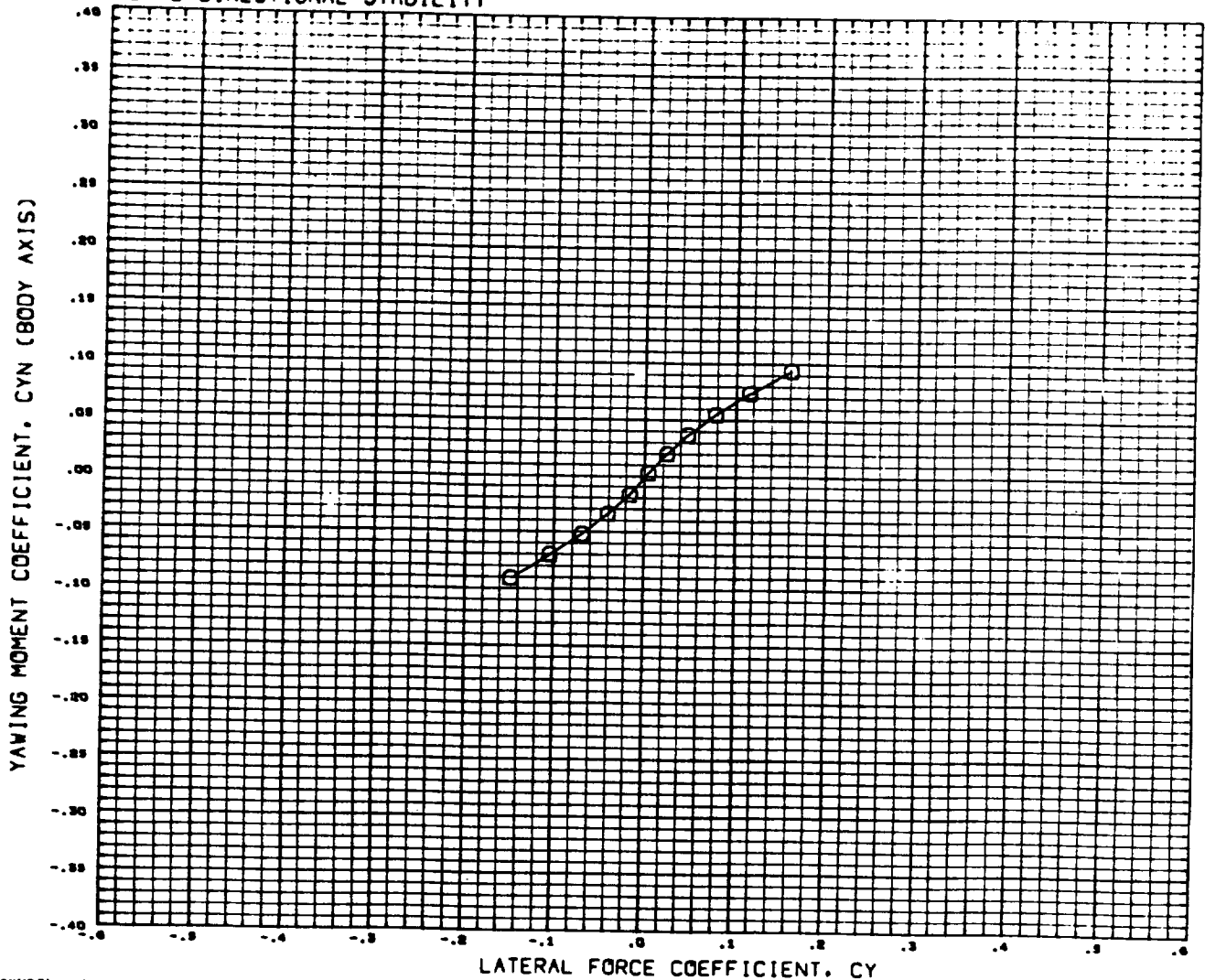
MODEL

W6B2C12

(E3813G) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY



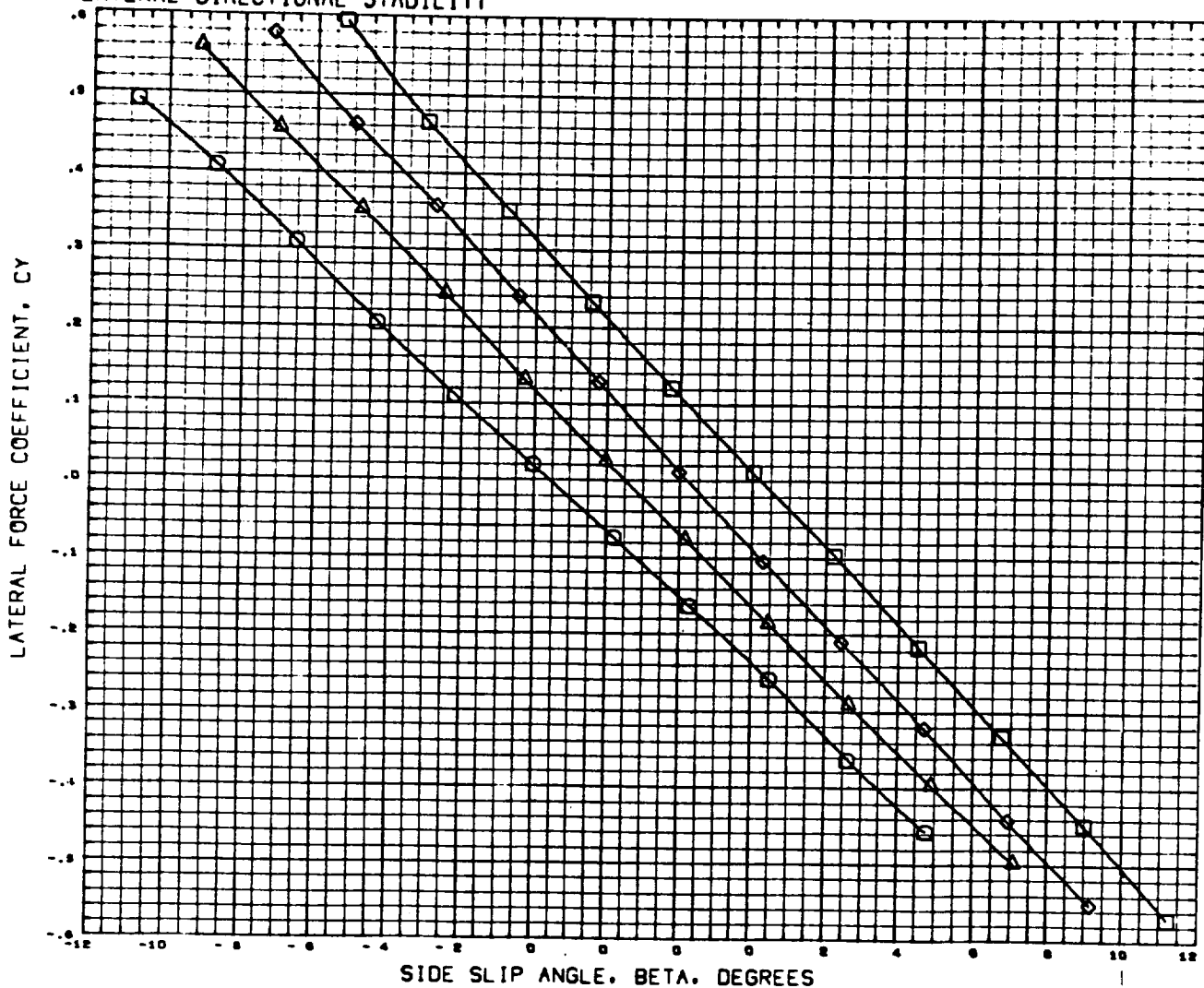
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		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	0.000

DATA HIST. CODE *E

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

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LATERAL DIRECTIONAL STABILITY



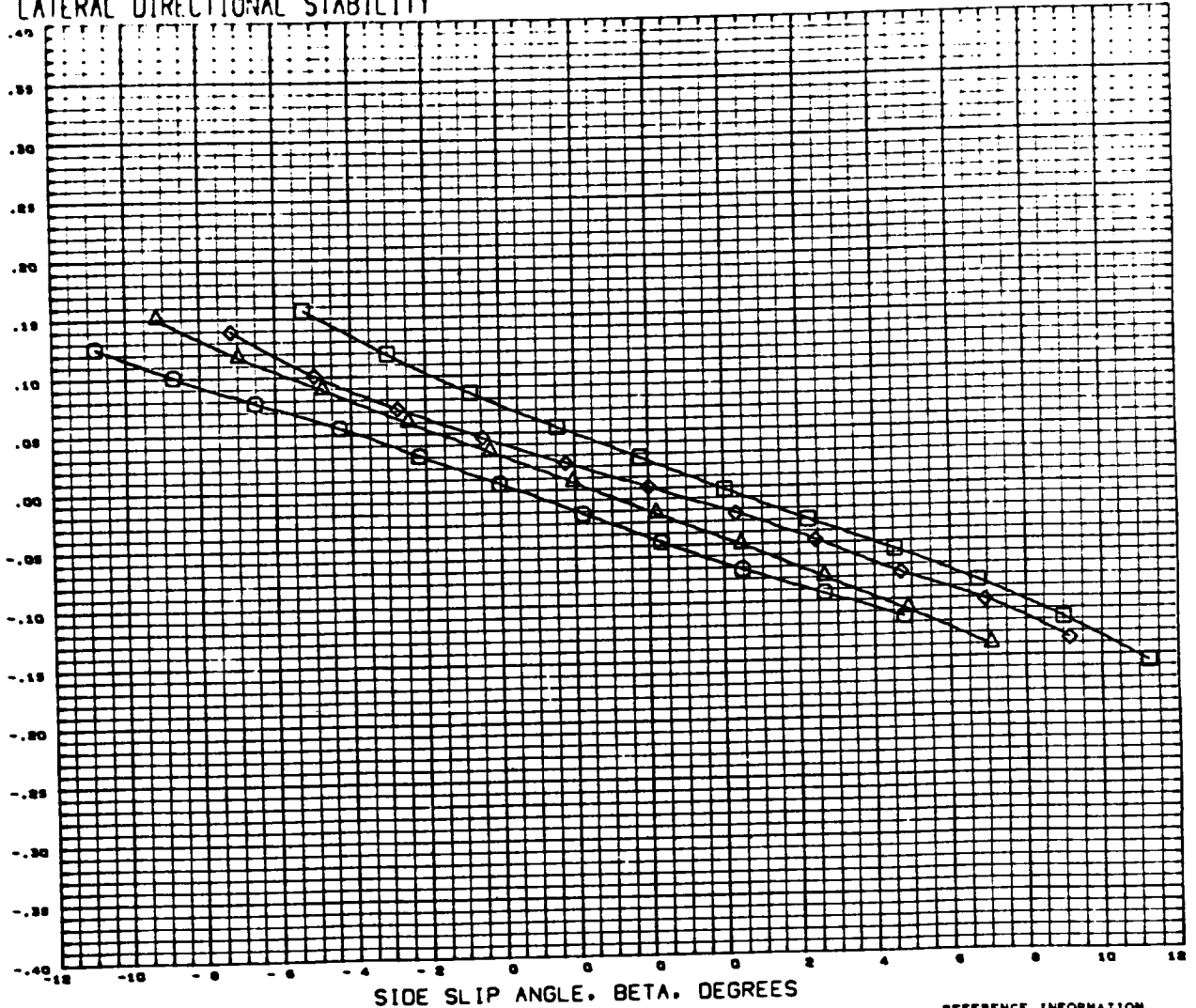
SYMBOL	MACH	PARAMETRIC VALUES
○	0.602	ALPHA 10.000 DEL 0.000
△	0.899	DER 0.000 ELEVTR 0.000
□	1.006	AILRON 0.000 CANARD 0.000
◇	1.199	

REFERENCE INFORMATION		
BREF	4.6225	30. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL	MACH	PARAMETRIC VALUES
○	0.602	ALPHA 10.000 DEL 0.000
△	0.899	DER 0.000 ELEVTR 0.000
◇	1.006	ATLRON 0.000 CANARD 0.000
□	1.199	

REFERENCE INFORMATION		
SREF	4.6225	88. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

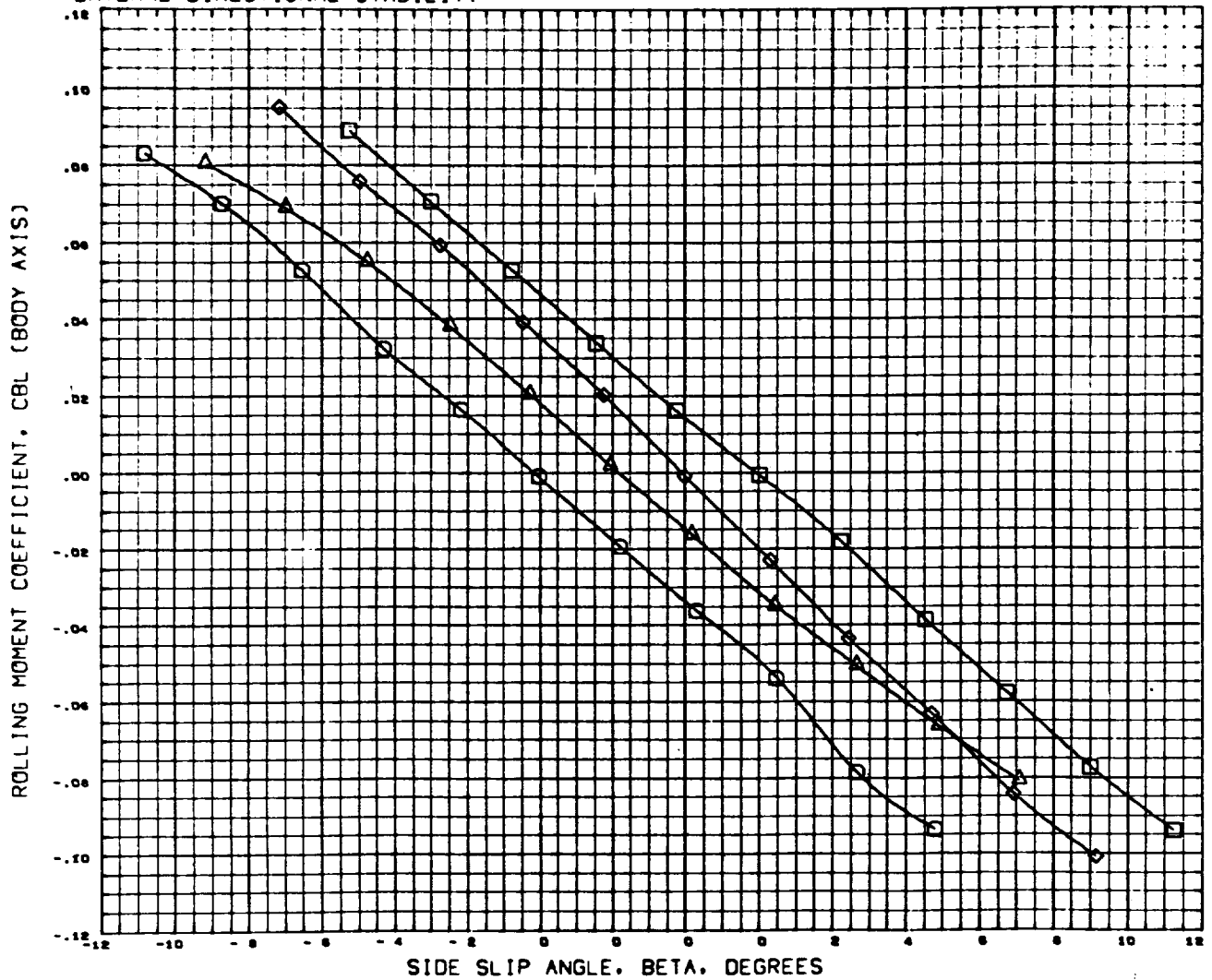
MODEL

W6B2011C12V2 (E3841G)

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LATERAL DIRECTIONAL STABILITY

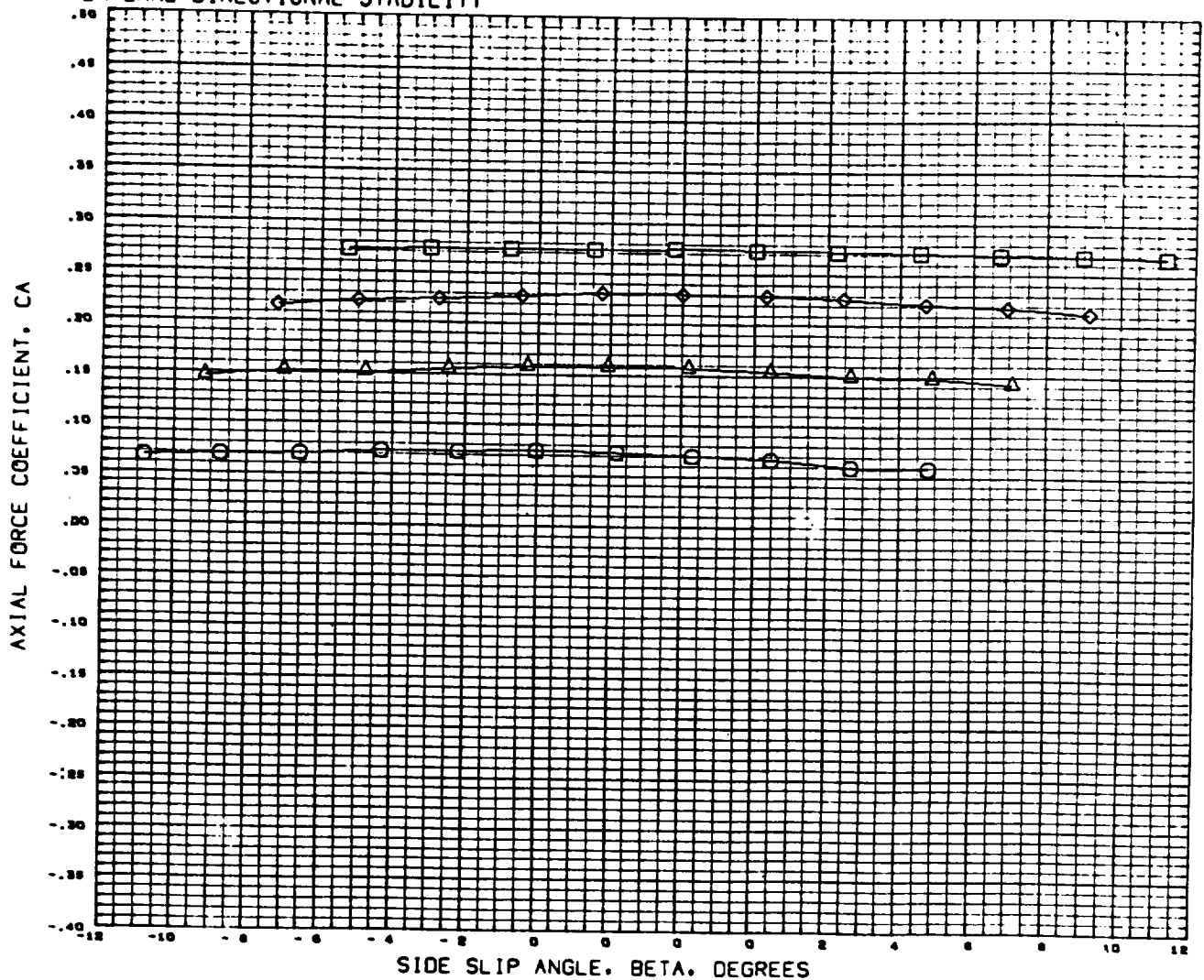


SYMBOL	MACH	PARAMETRIC VALUES
○	0.602	ALPHA 10.000 DEL 0.000
△	0.899	DER 0.000 ELEVTR 0.000
◇	1.006	AILRON 0.000 CANARD 0.000
□	1.199	

REFERENCE INFORMATION		
SRF	4.6225	30. IN.
LREF	1.5360	IN.
SRF	4.3000	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

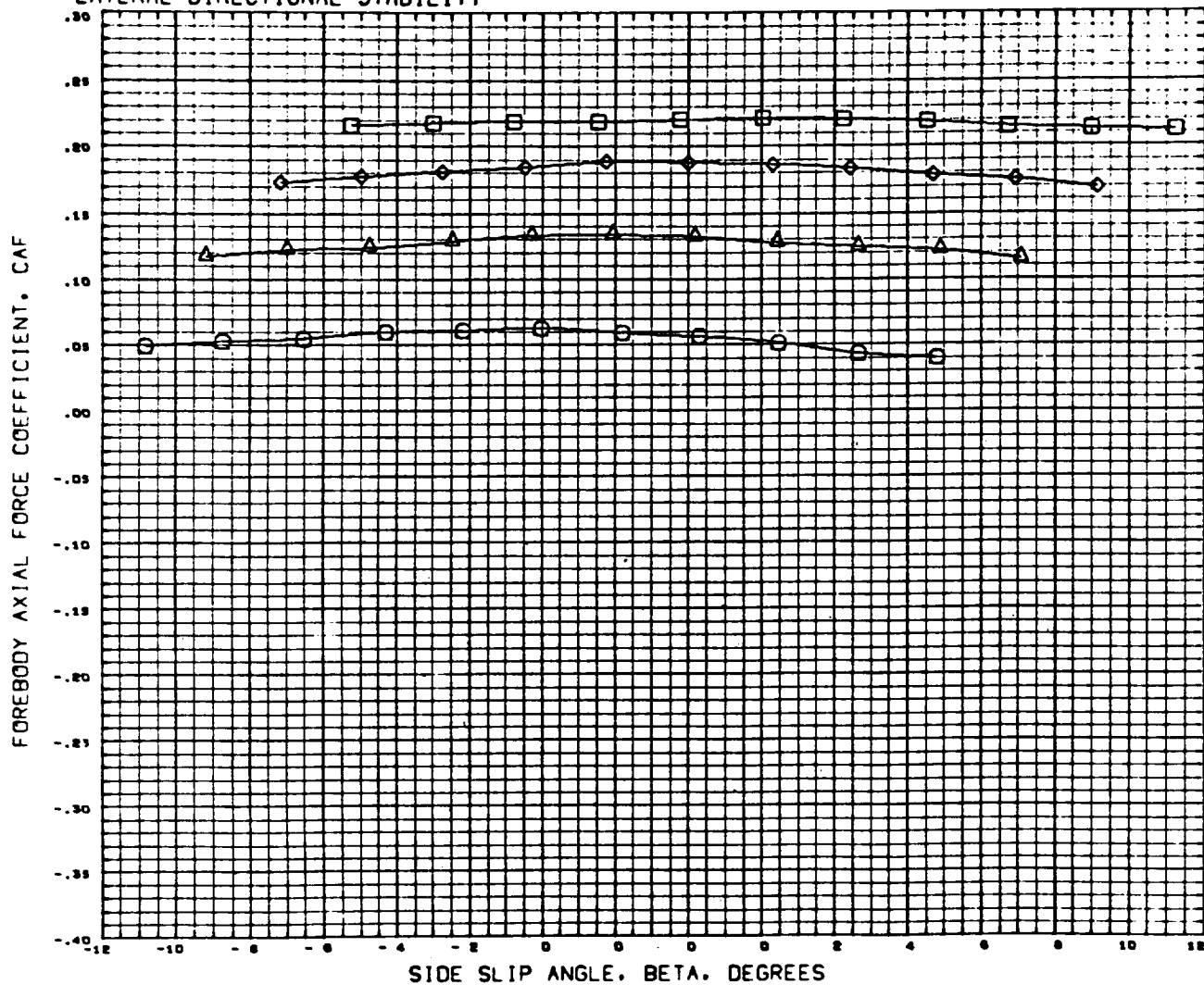
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
□	0.902	ALPHA 10.000 DEL 0.000	SREF 4.6225 SQ. IN.
◇	0.999	DER 0.000 ELEVTR 0.000	LREF 1.3360 IN.
△	1.006	AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
○	1.199		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

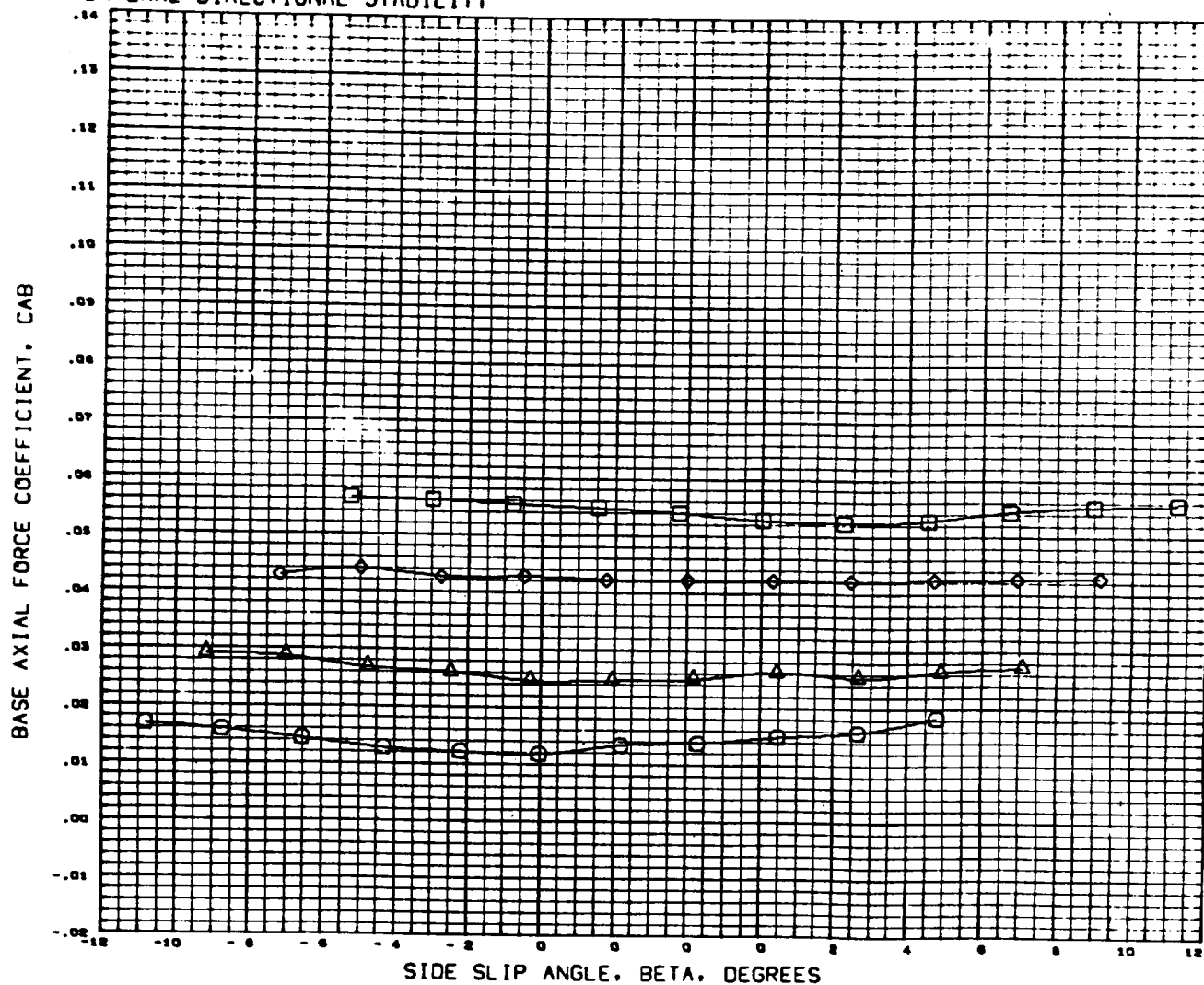
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.602	ALPHA	10.000	DEL	0.000	SREF	4.6225	30. IN.
△	0.899	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	1.006	ATLRON	0.000	CANARD	0.000	OREF	4.3000	IN.
□	1.199					XNRP	2.4000	IN.
						YNRP	0.0000	IN.
						ZNRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

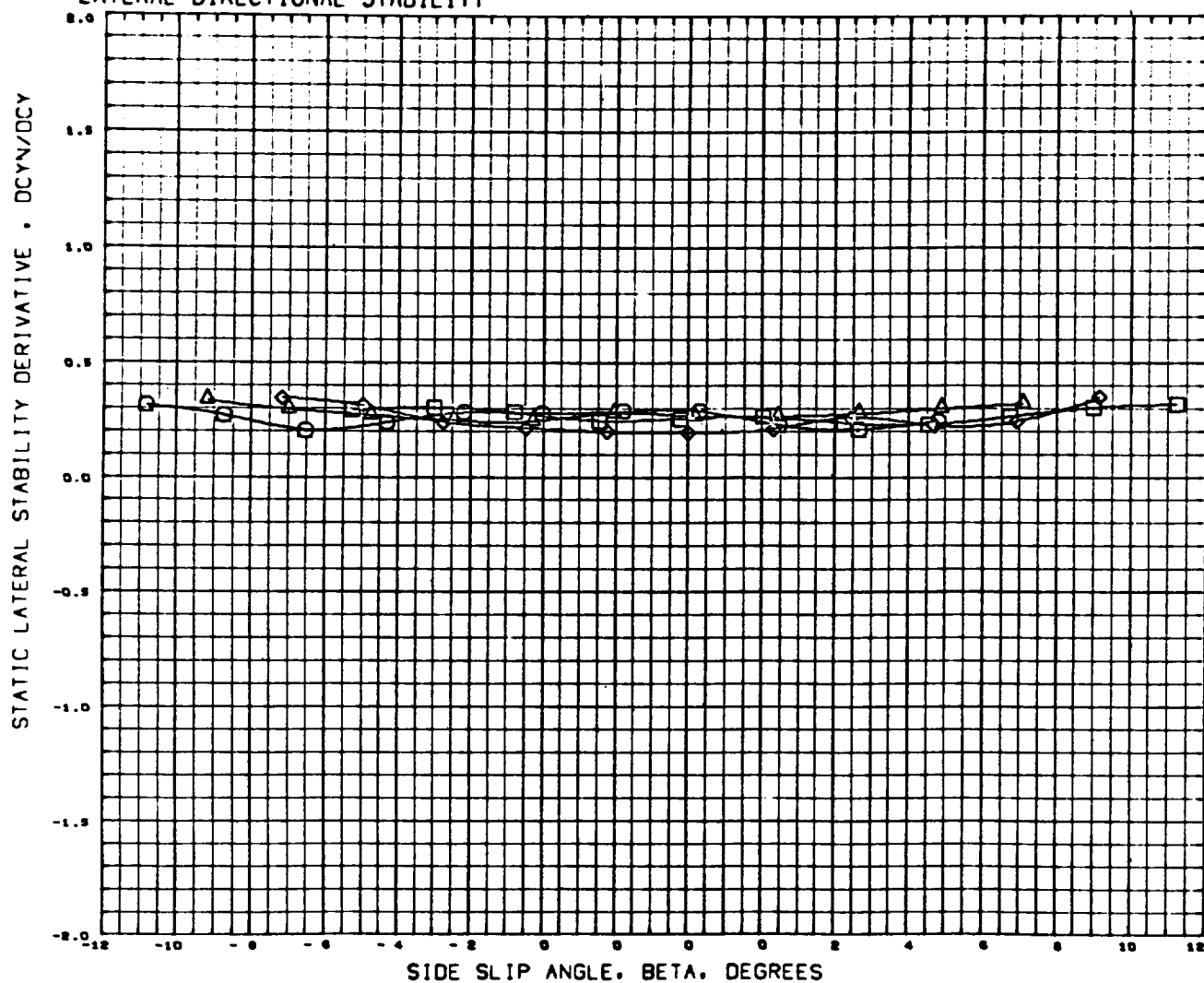


SYMBOL	MACH	PARAMETRIC VALUES
○	0.602	ALPHA 10.000 DEL 0.000
◇	0.699	DER 0.000 ELEVTR 0.000
△	1.006	AILRON 0.000 CANARD 0.000
□	1.199	-

DATA HIST. CODE *E

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY

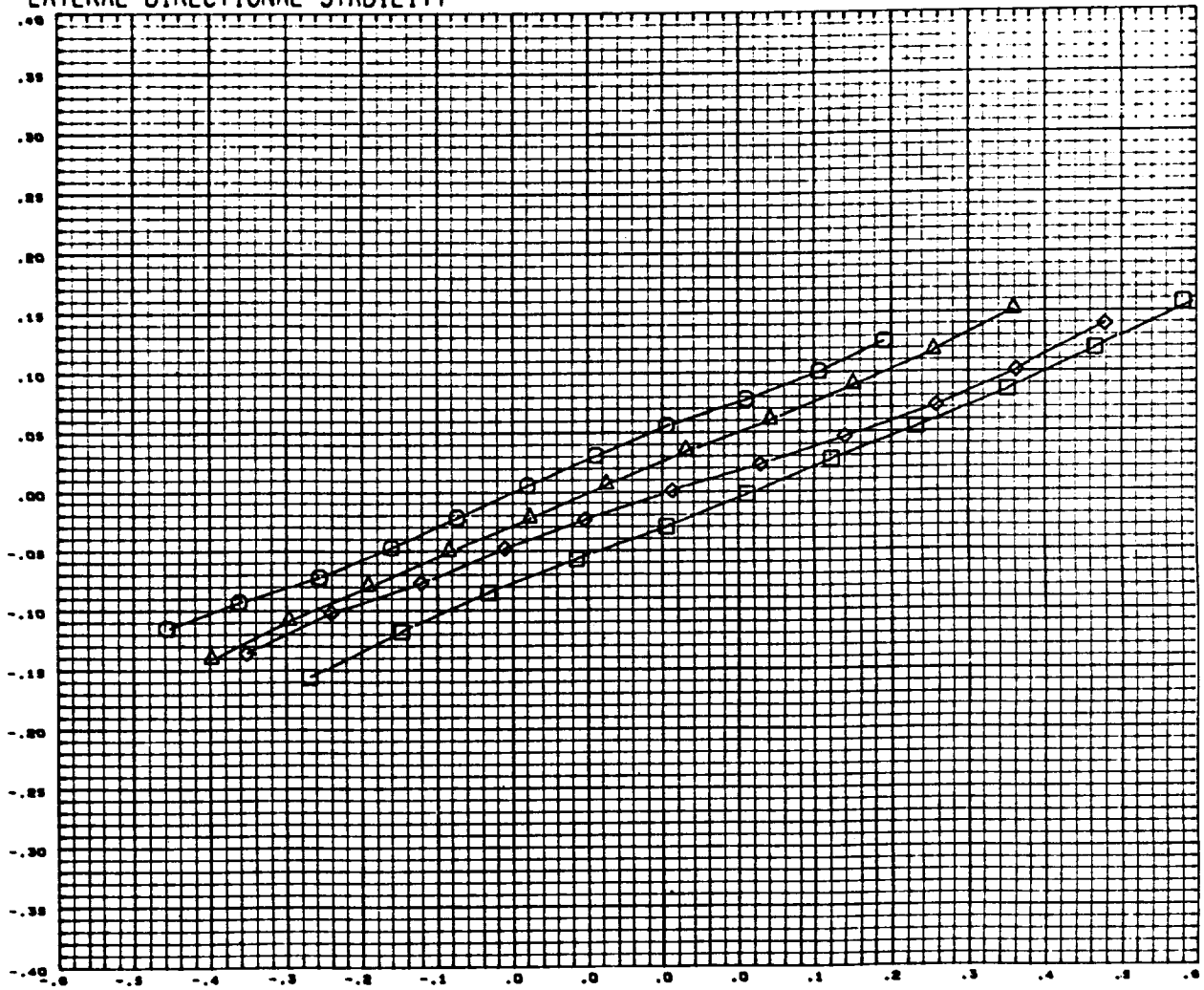


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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△	0.699	DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
◇	1.006	AILRON	0.000	CANARD	0.000	QREF	4.3000	IN.
□	1.199					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)

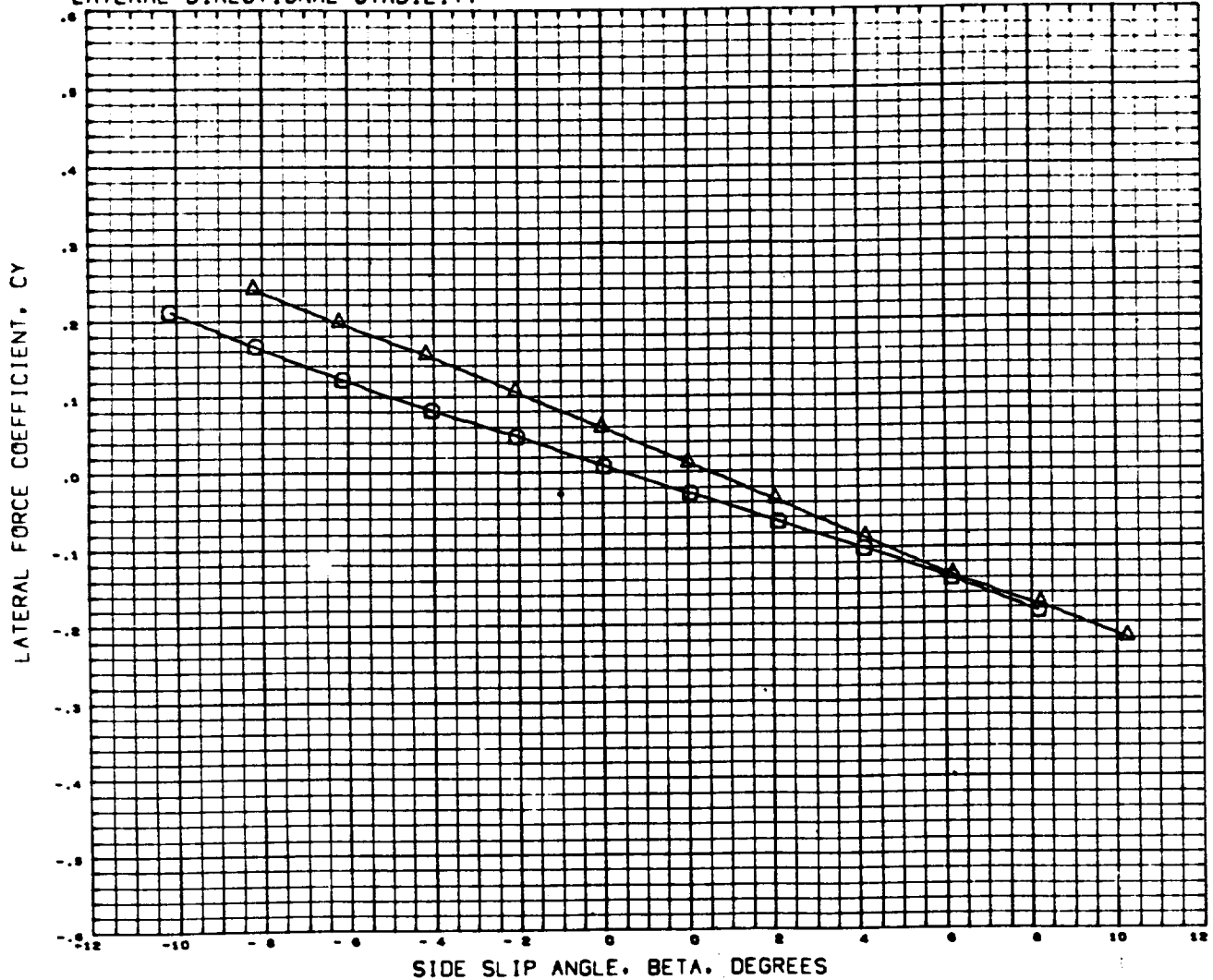


SYMBOL	MACH	PARAMETRIC VALUES			
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△	0.699	DER	0.000	ELEVTR	0.000
◇	1.006	ATLRON	0.000	CANARD	0.000
□	1.199				

REFERENCE INFORMATION		
SREP	4.6225	sq. in.
LREP	1.5360	in.
BREP	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

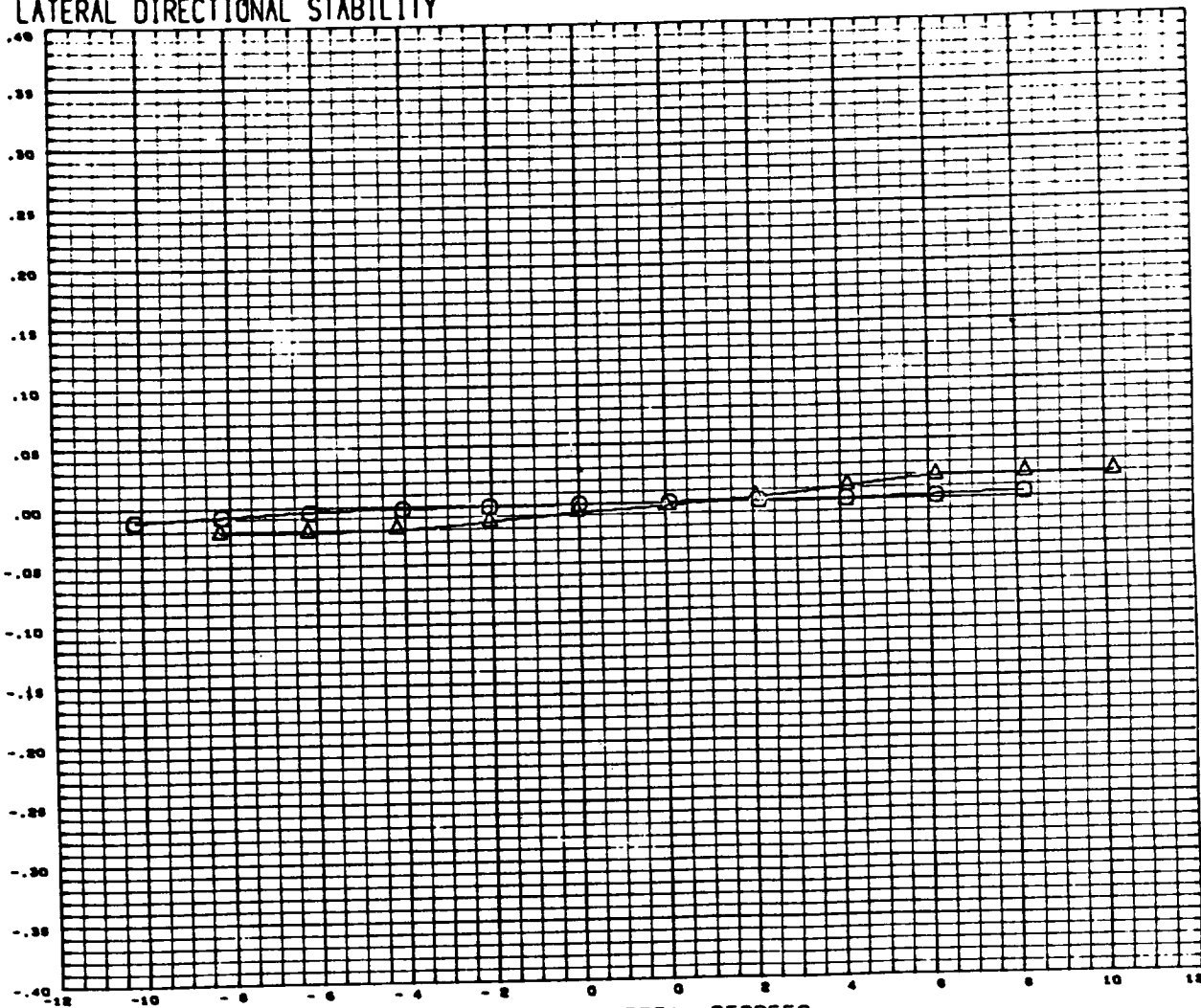


SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.999	0.900	ALPHA	DEL	DER	ELEVTR	BREF	LREF	SCALE
			10.000	0.000	0.000	0.000	4.6225	1.9360	0.0025
			0.000	0.000	0.000	0.000	4.3000	2.4000	0.0000
			0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL
○
△

MACH
0.999
0.900

ALPHA
DER
ATLRON

PARAMETRIC VALUES
10.000 DEL 0.000
0.000 ELEVTR 0.000
0.000 CANARD 0.000

REFERENCE INFORMATION

SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W6HB2C12V2

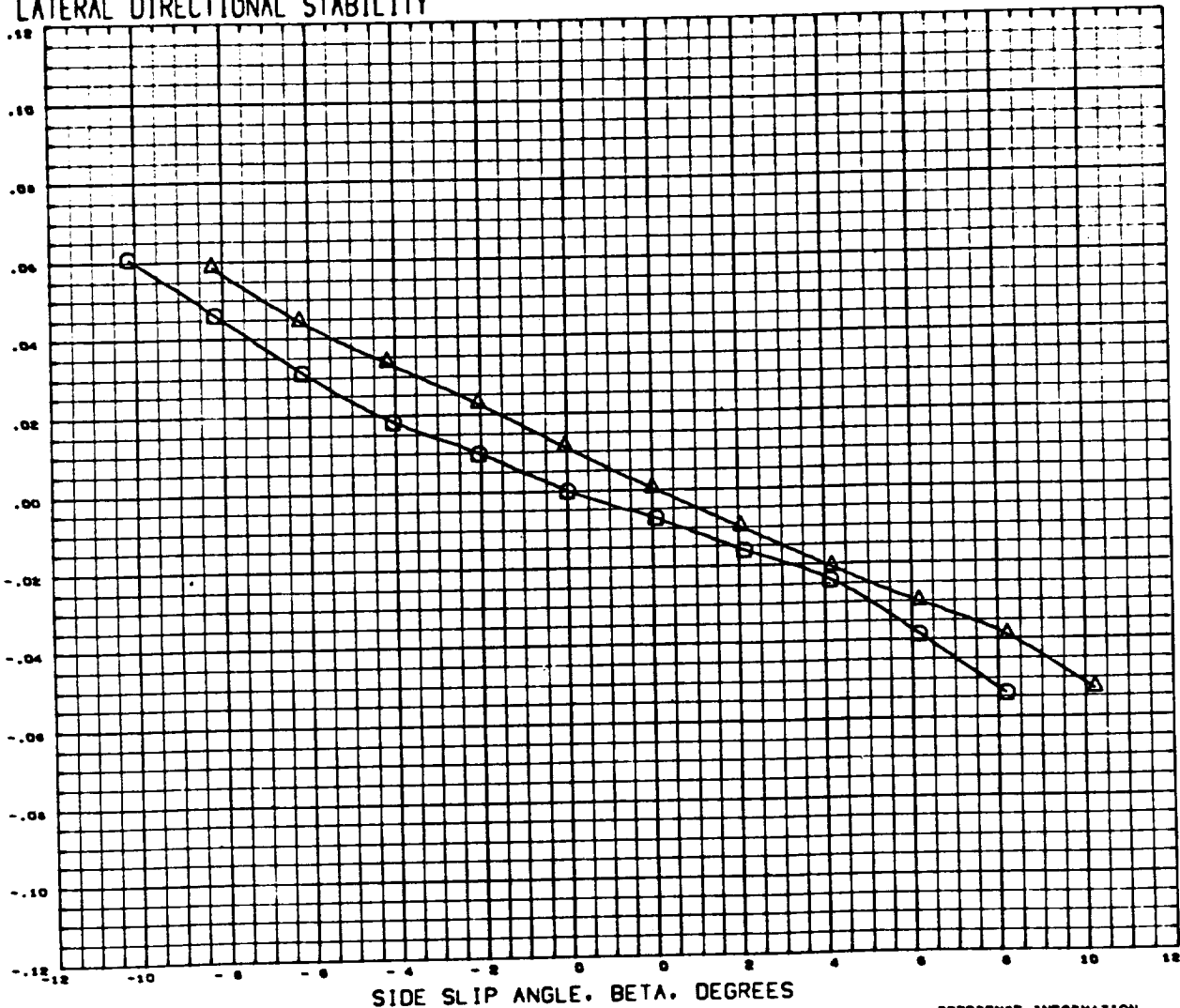
(E3837G)

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LATERAL DIRECTIONAL STABILITY

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)



SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	0.999	ALPHA	10.000	DEL	0.000
	0.900	DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.6225	sq. in.
LREF	1.9360	in.
SRFP	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

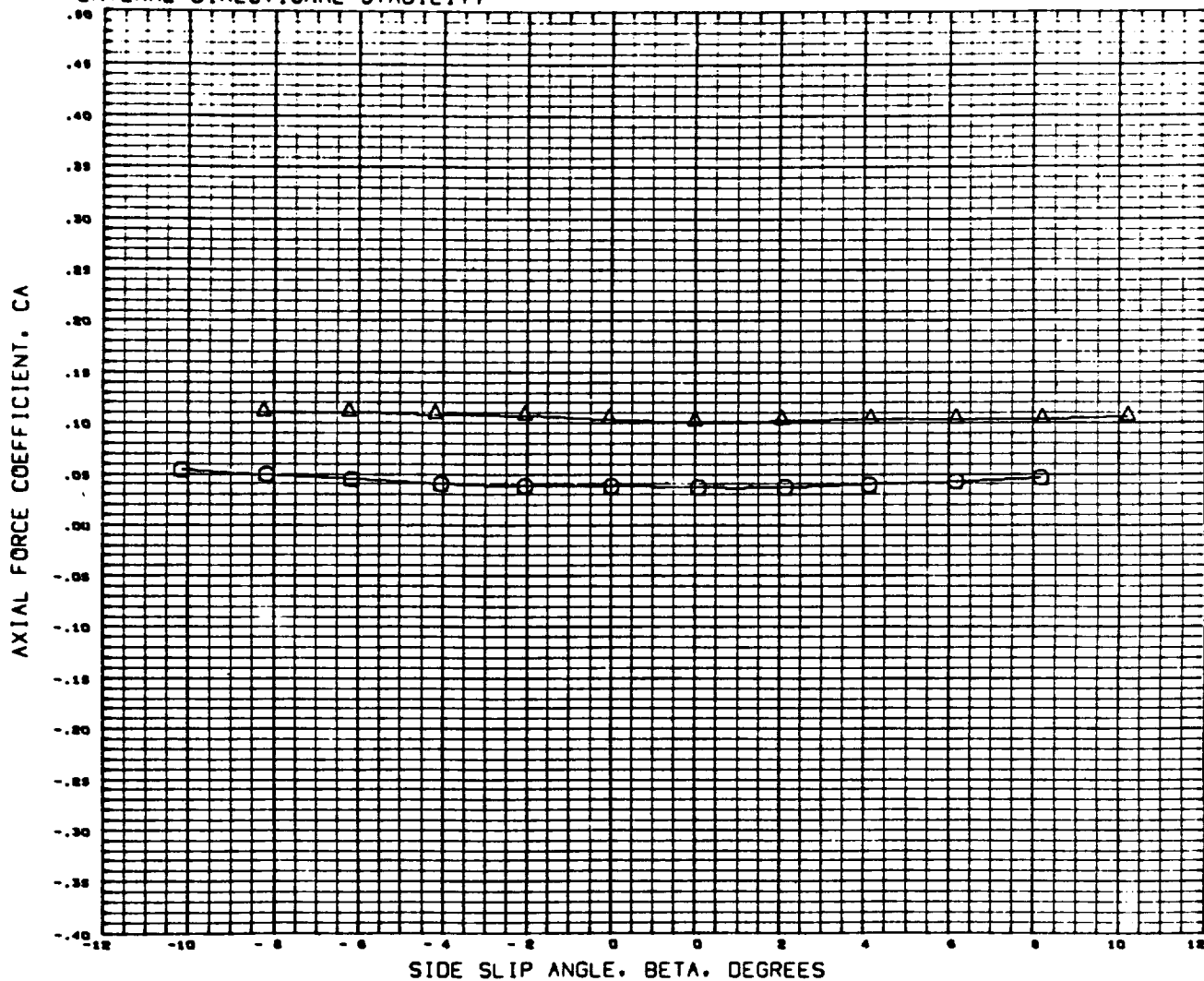
W6H82C12V2

(E3837G)

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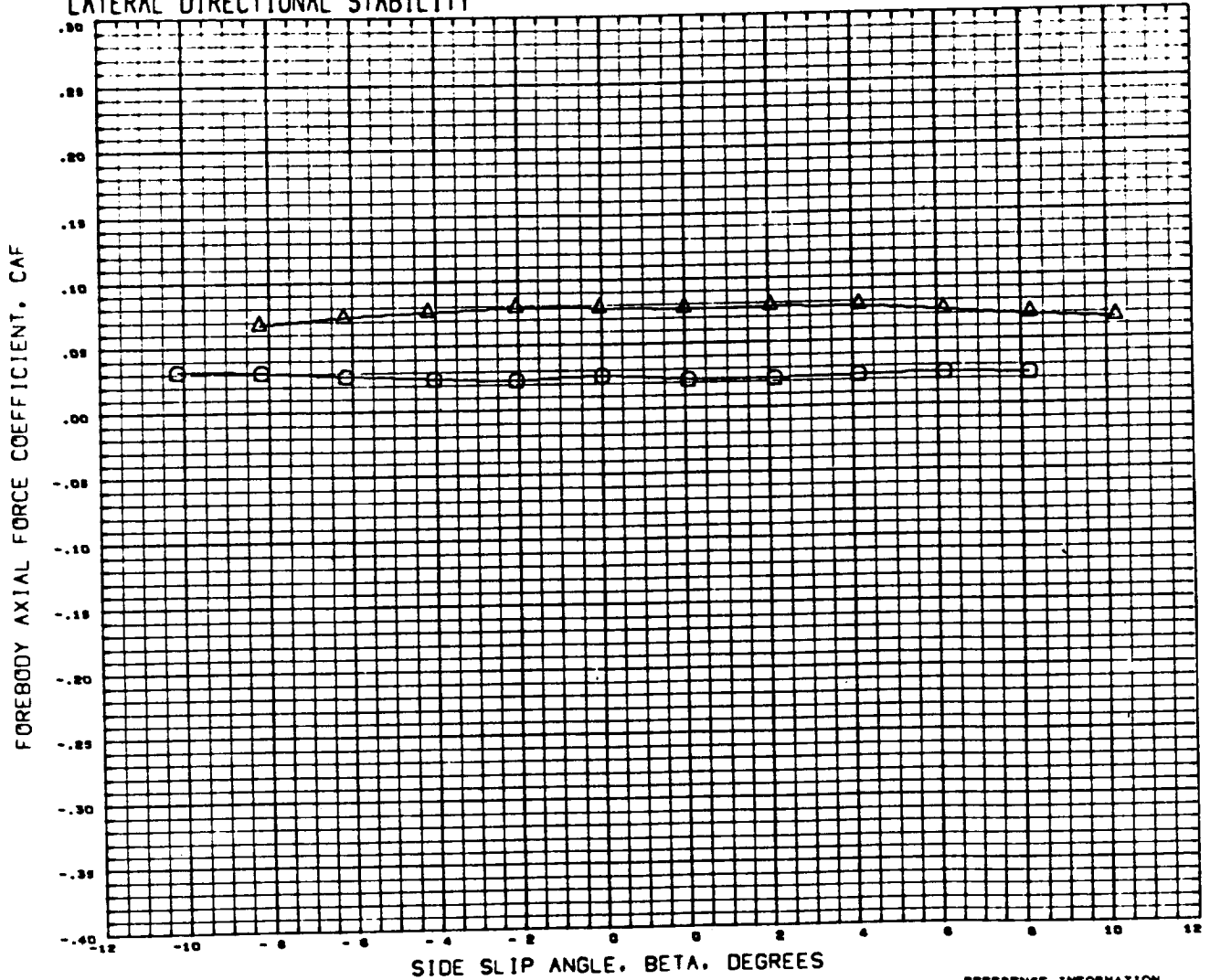
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREP	LREP	BREP
○	0.999	10.000	0.000	0.000	0.000	4.6225	1.5360	4.3000
△	0.900	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
		AILRON				ZMRP	SCALE	
						0.0000	0.0025	

DATA HIST. CODE *E

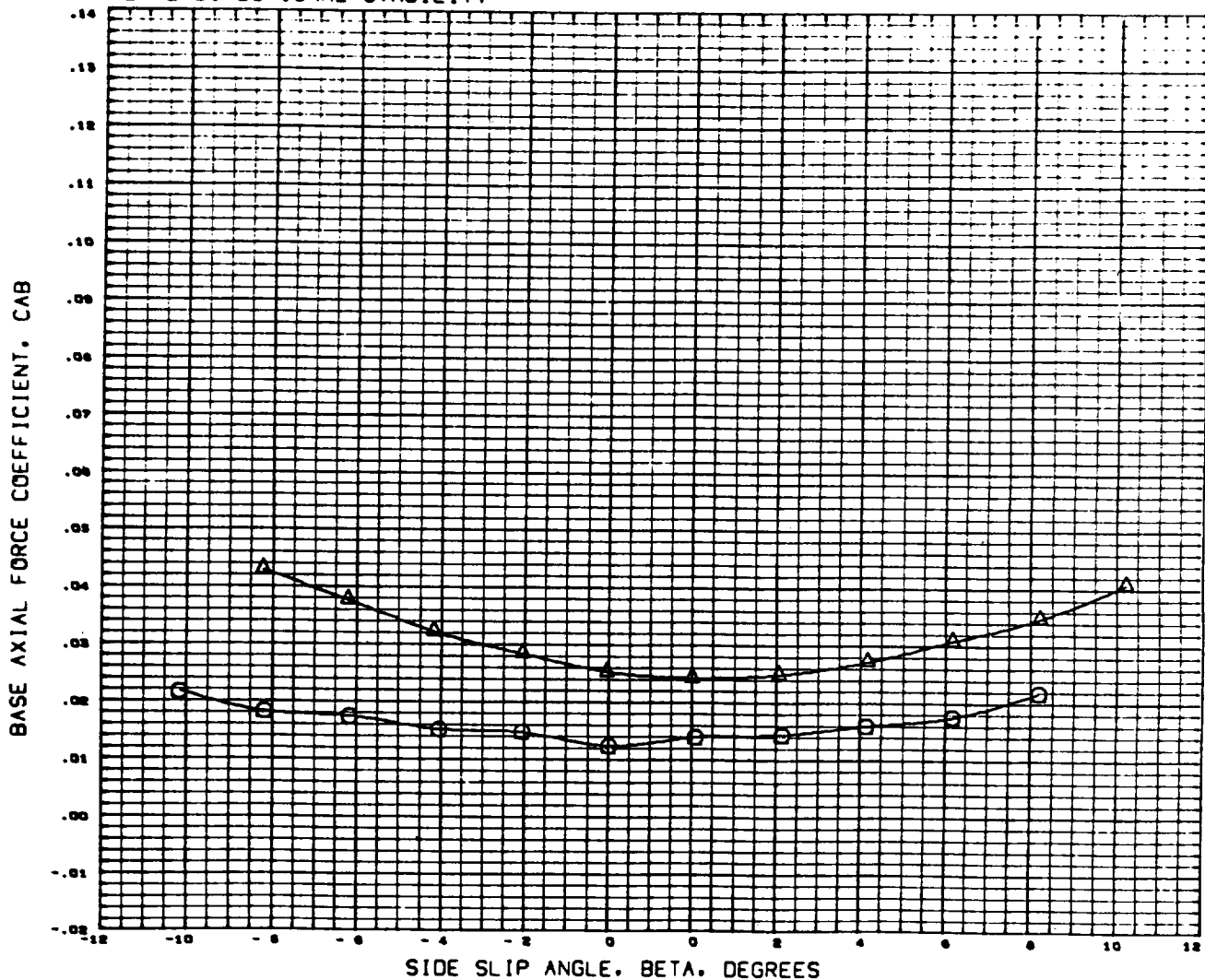
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.599	0.900	ALPHA	DEL	ELEVTR	CANARD	SRP	LRP	BRP
○	0.599	0.900	10.000	0.000	0.000	0.000	4.0225	1.9360	4.3000
△	0.599	0.900	10.000	0.000	0.000	0.000	4.0225	1.9360	4.3000
			ATLROM				ZMRP	YMRP	ZMRP
							0.4000	0.0000	0.0000
							SCALE	0.0025	0.0025

DATA HIST. CODE 4E

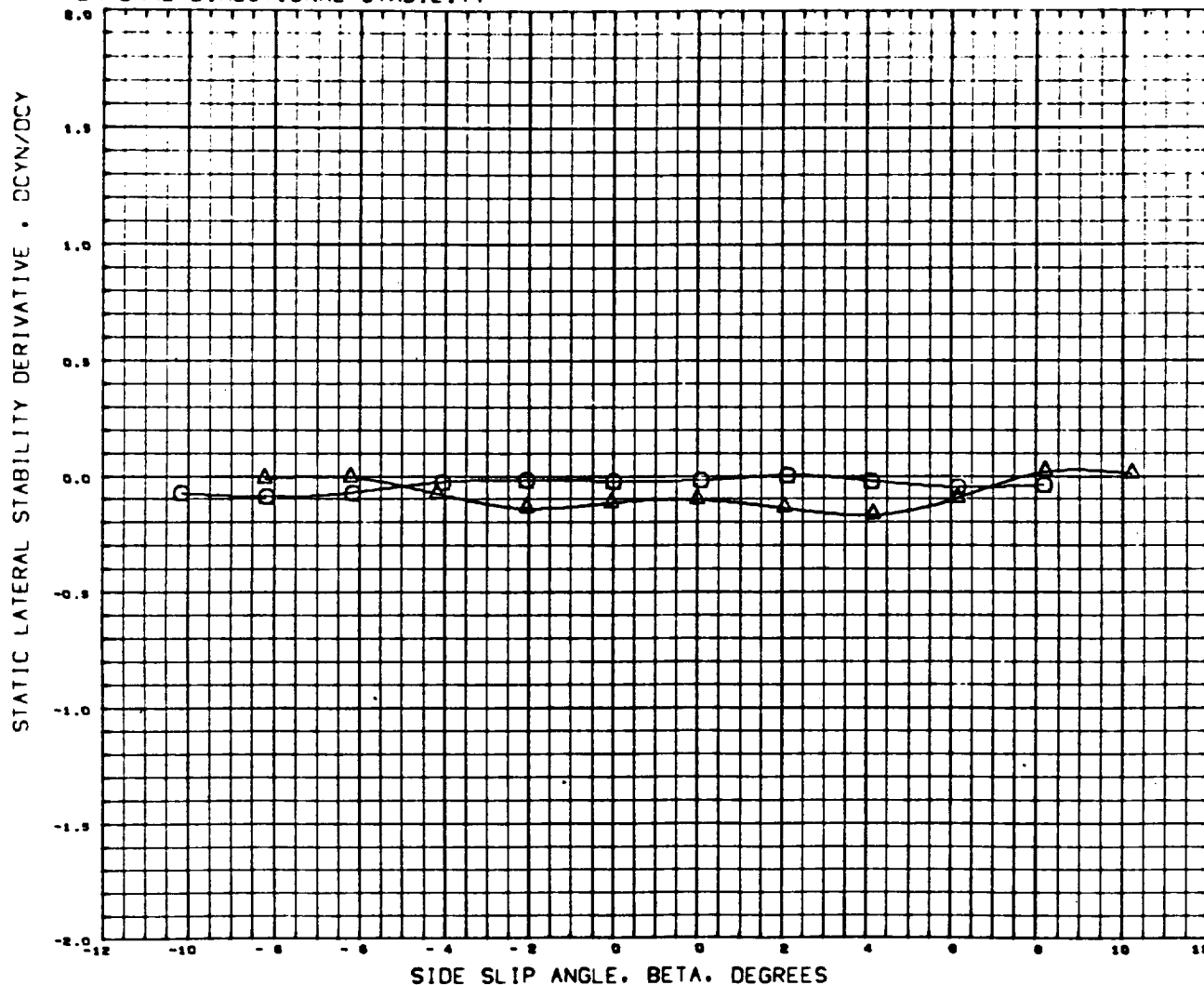
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.999	ALPHA	10.000	DEL	0.000		SREF	4.6225	30. IN.
○	0.900	DER	0.000	ELEVTR	0.000		LREF	1.5360	IN.
△		AILRON	0.000	CANARD	0.000		BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

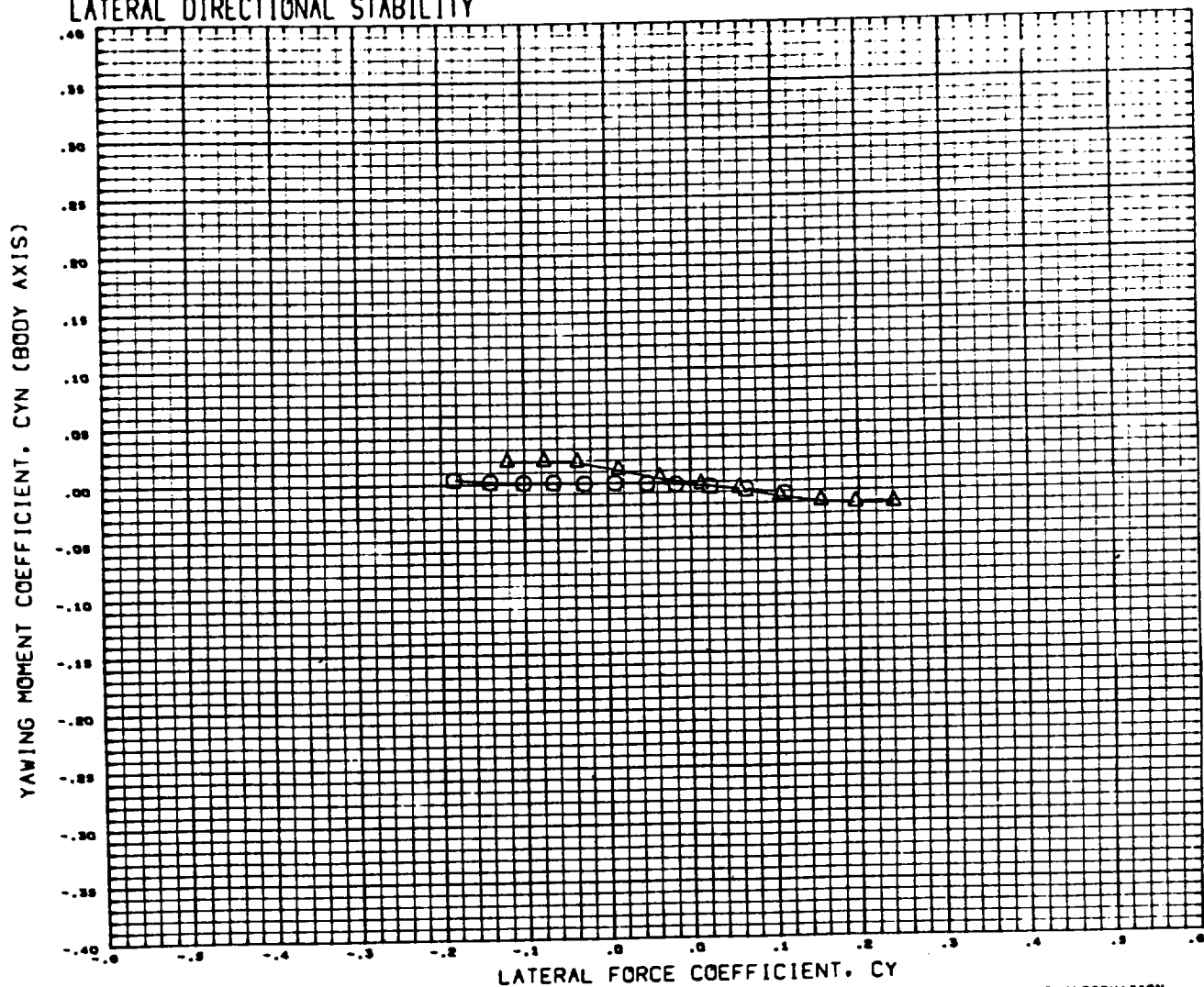
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.999	ALPHA	10.000	DEL	0.000	SREF	4.6223	50. IN.
	0.900	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
						XHRP	2.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



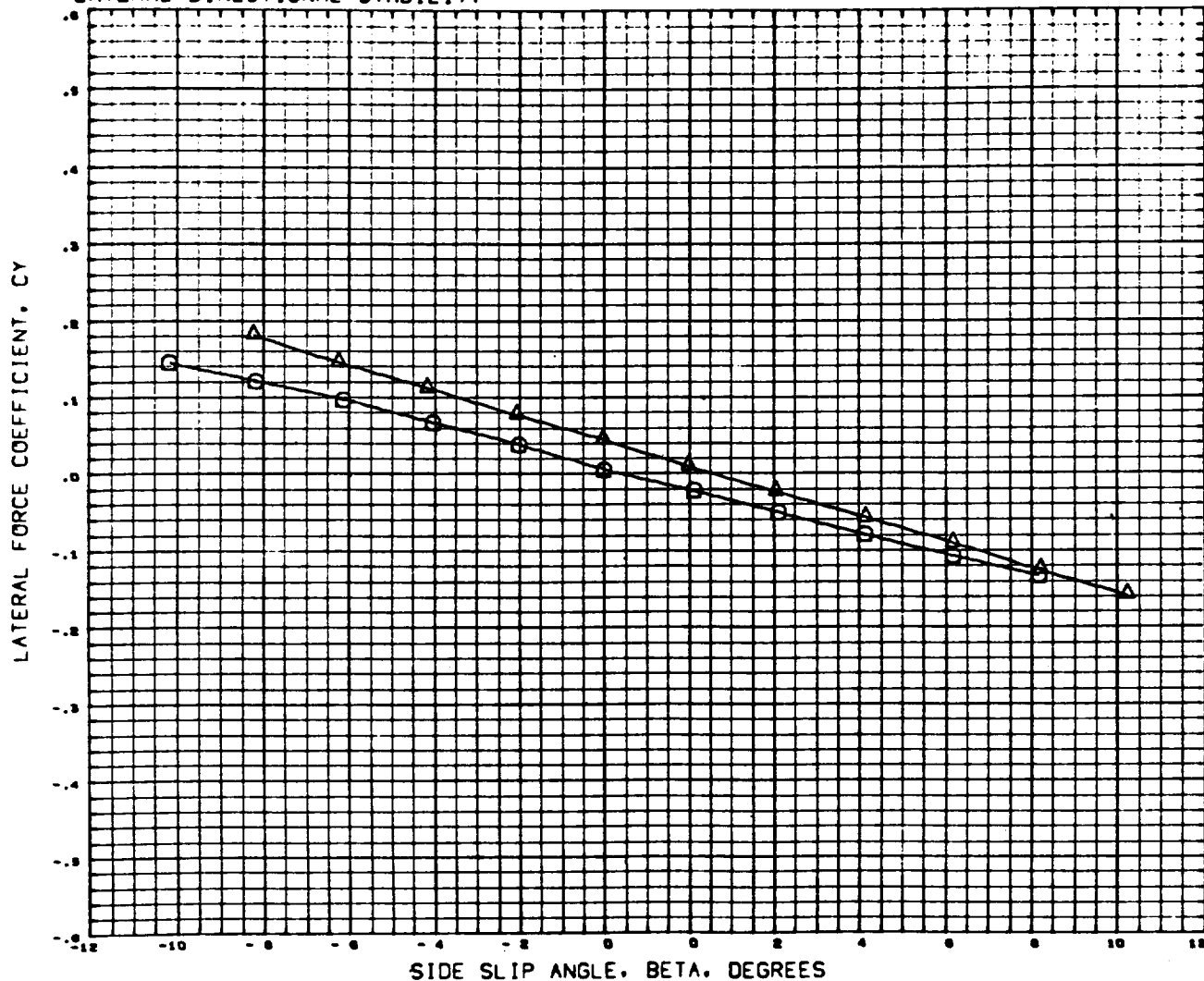
SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	0.599	ALPHA	10.000	DEL	0.000
	0.900	DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION	
SREP	4.6225 SQ. IN.
LREP	1.5360 IN.
BREP	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

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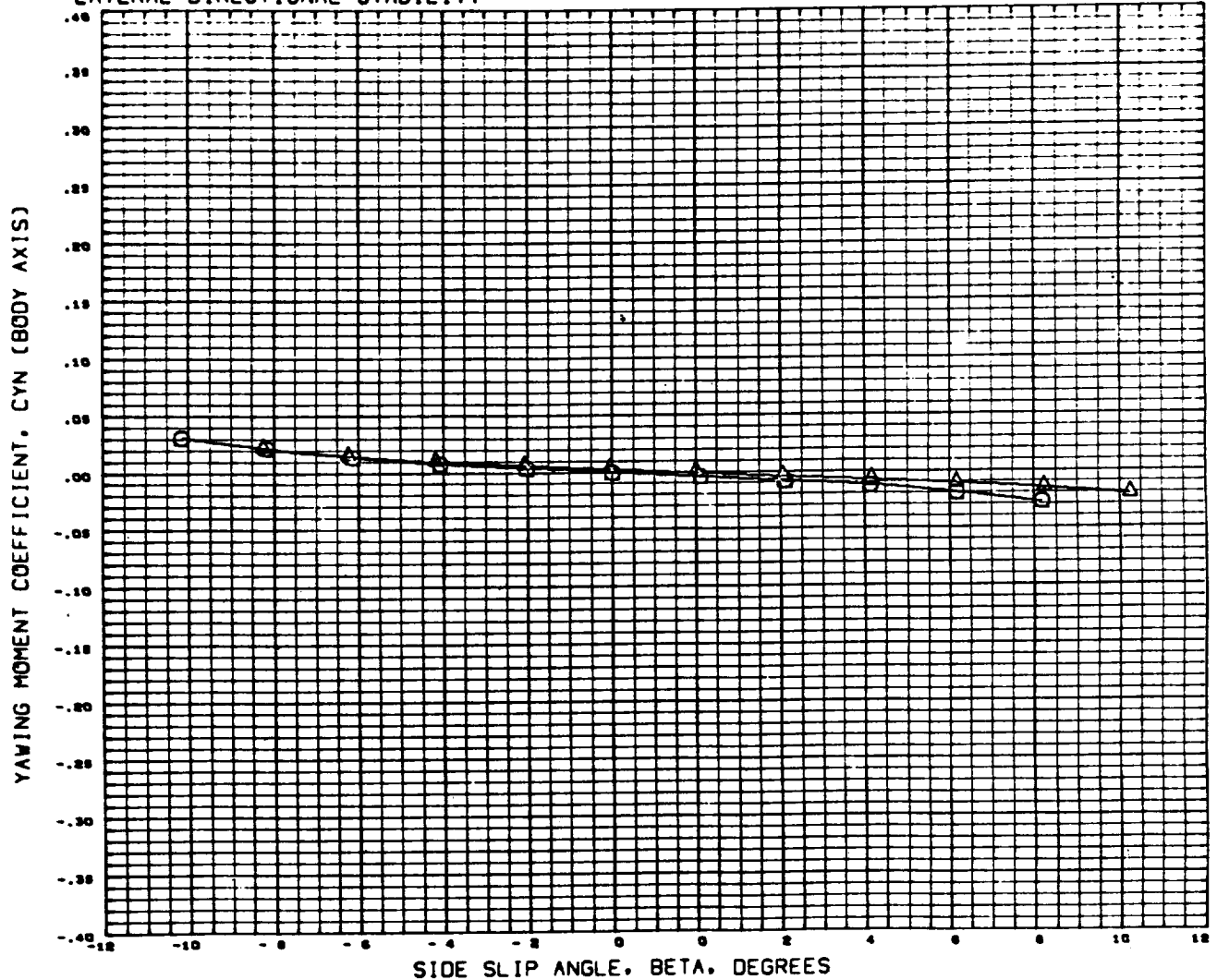
LATERAL DIRECTIONAL STABILITY



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			DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
			ATLRON	0.000	CANARD	0.000	BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	IN.

DATA HIST. CODE *E

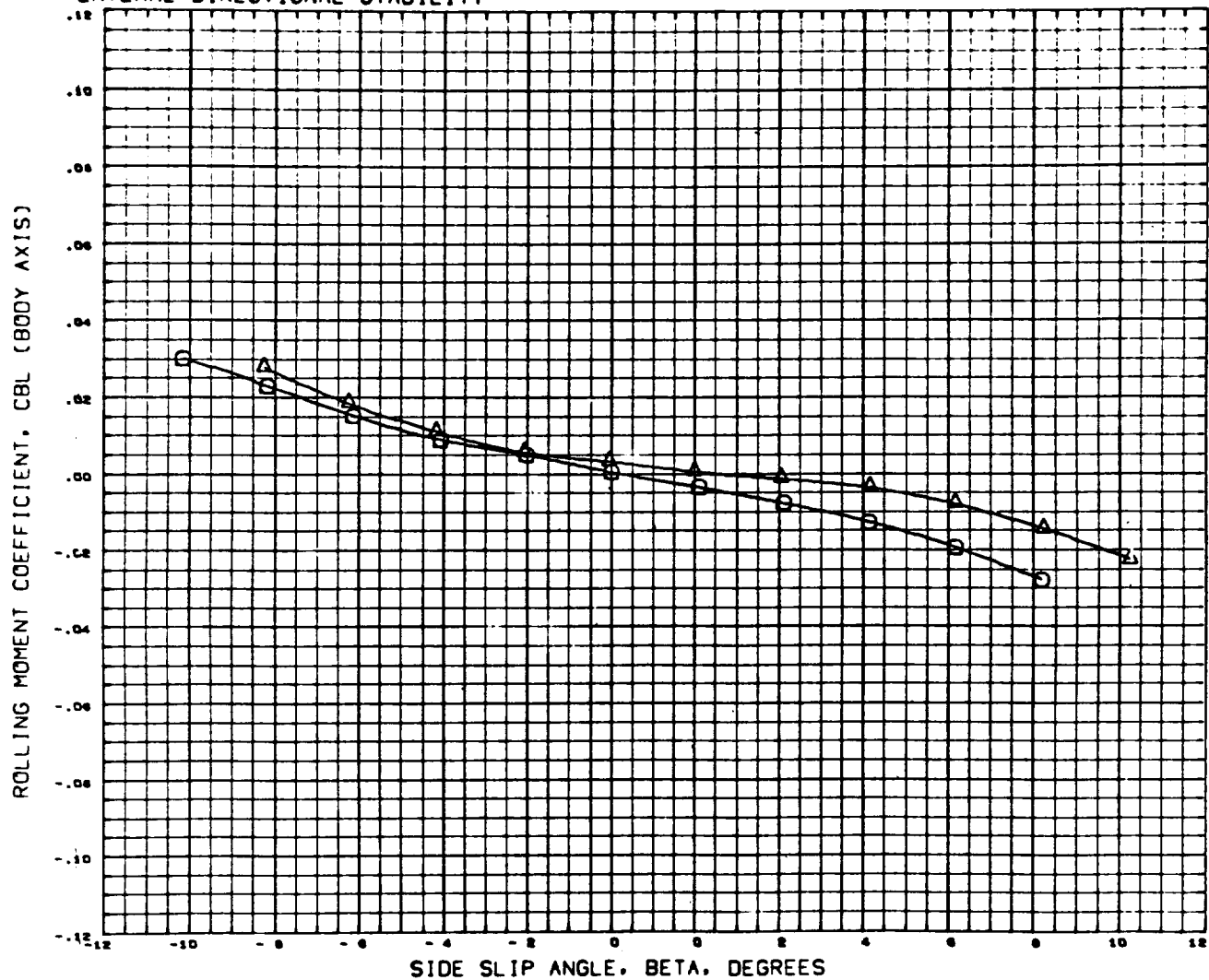
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	SREF	SG, IN.
○	0.000	10.000	0.000	0.000	0.000	LREF	1.5360 IN.
	0.097	0.000	0.000	0.000	0.000	BREF	4.3000 IN.
		AILRON	0.000	CANARD	0.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

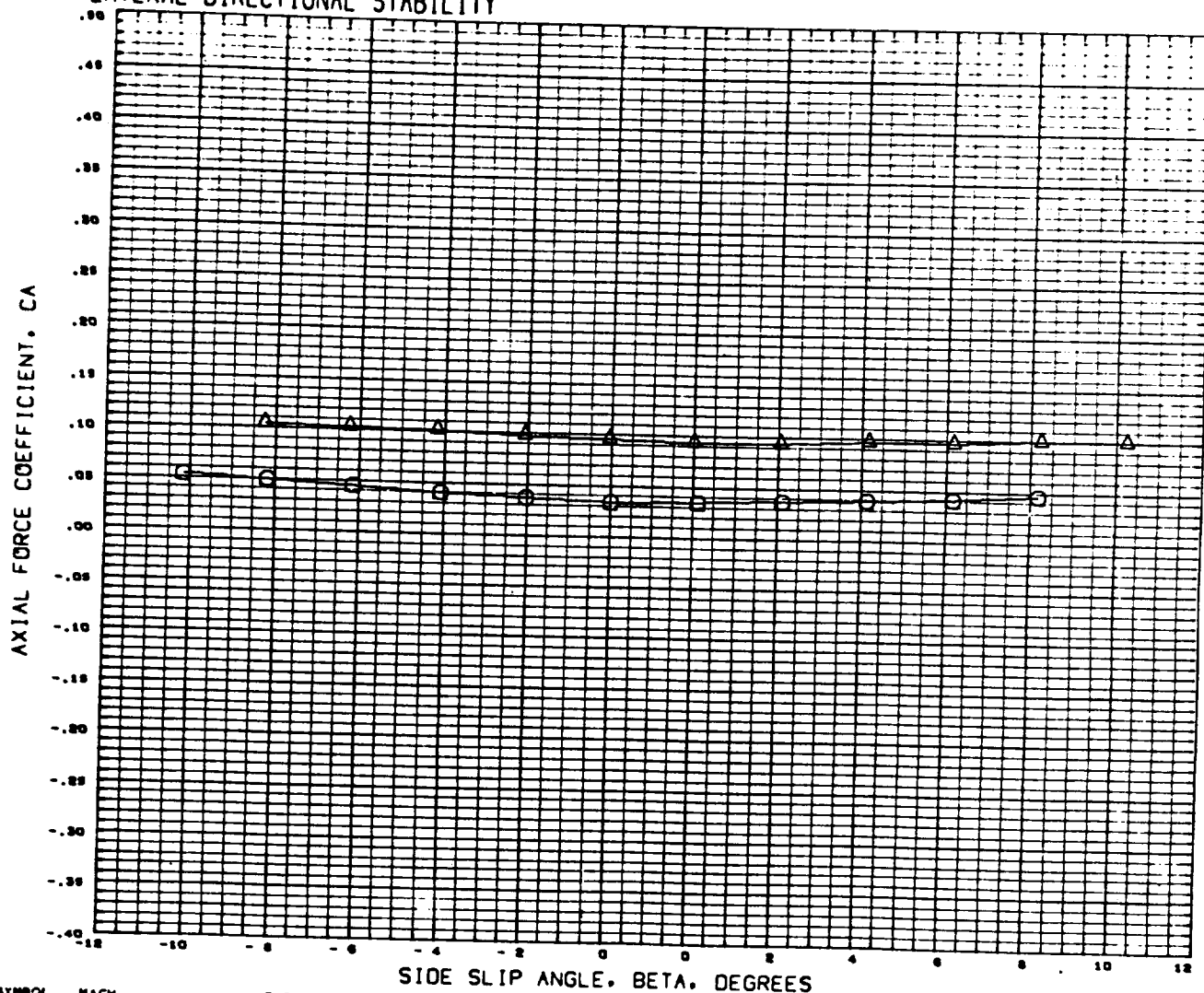
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.600	ALPHA	10.000	DEL	0.000		BREF	4.6225	SQ. IN.
	0.697	DER	0.000	ELEVTR	0.000		LREF	1.5360	IN.
		ATLRON	0.000	CANARD	0.000		BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

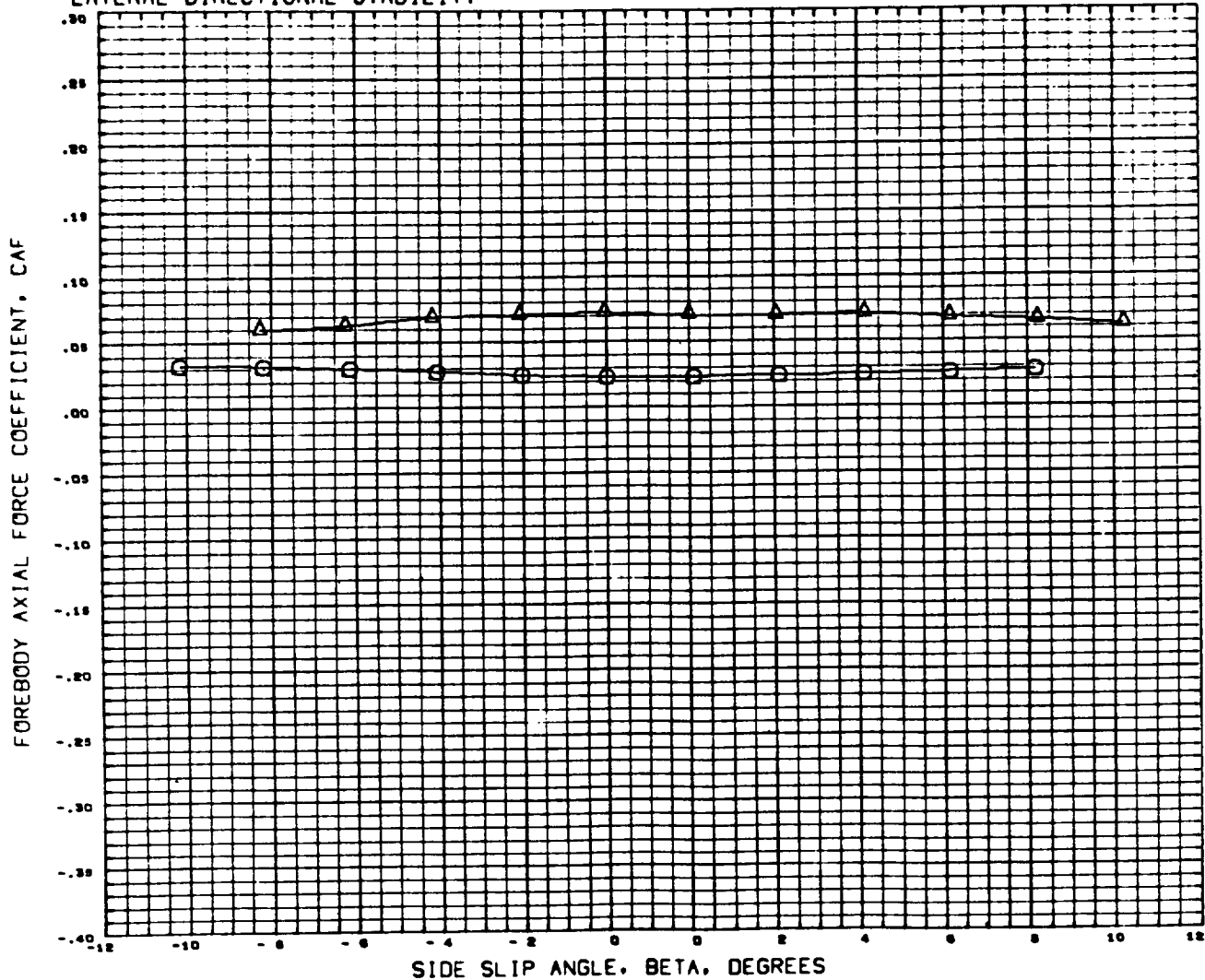


SYMBOL Δ \bigcirc MACH 0.600 0.897
 ALPHA 10.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD 0.000

REFERENCE INFORMATION
 SREF 4.6223 SQ. IN.
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 BREF 4.3000 IN.
 YMRP 2.4000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE 4E

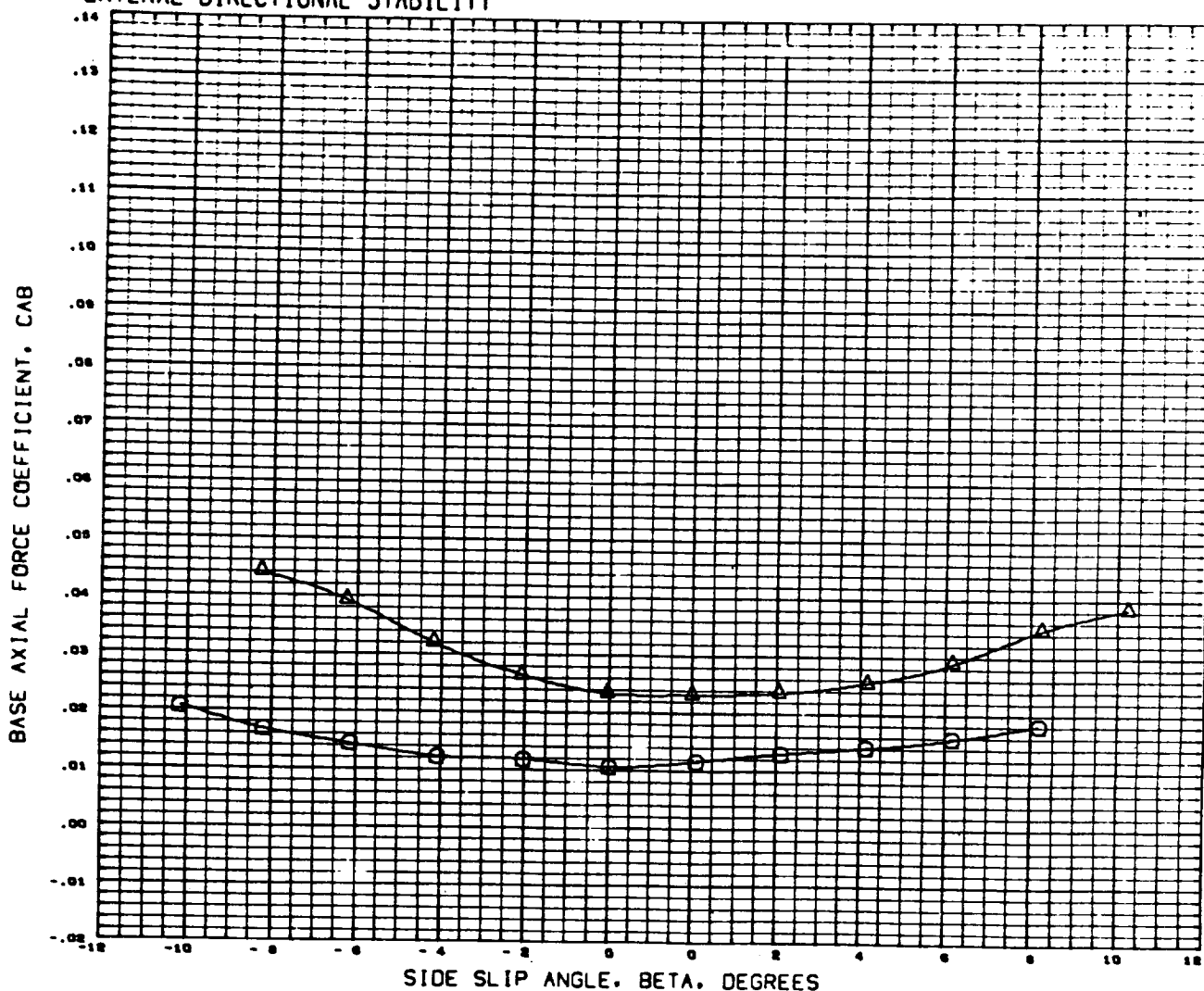
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION	
	0.600	0.697	ALPHA	DEL	ELEVTR	CANARD	SREF	LREF
			10.000	0.000	0.000	0.000	4.6225	1.9360
			DER				4.3000	2.4000
			ATLON				0.0000	0.0000
							0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.600	ALPHA 10.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	0.997	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
		AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

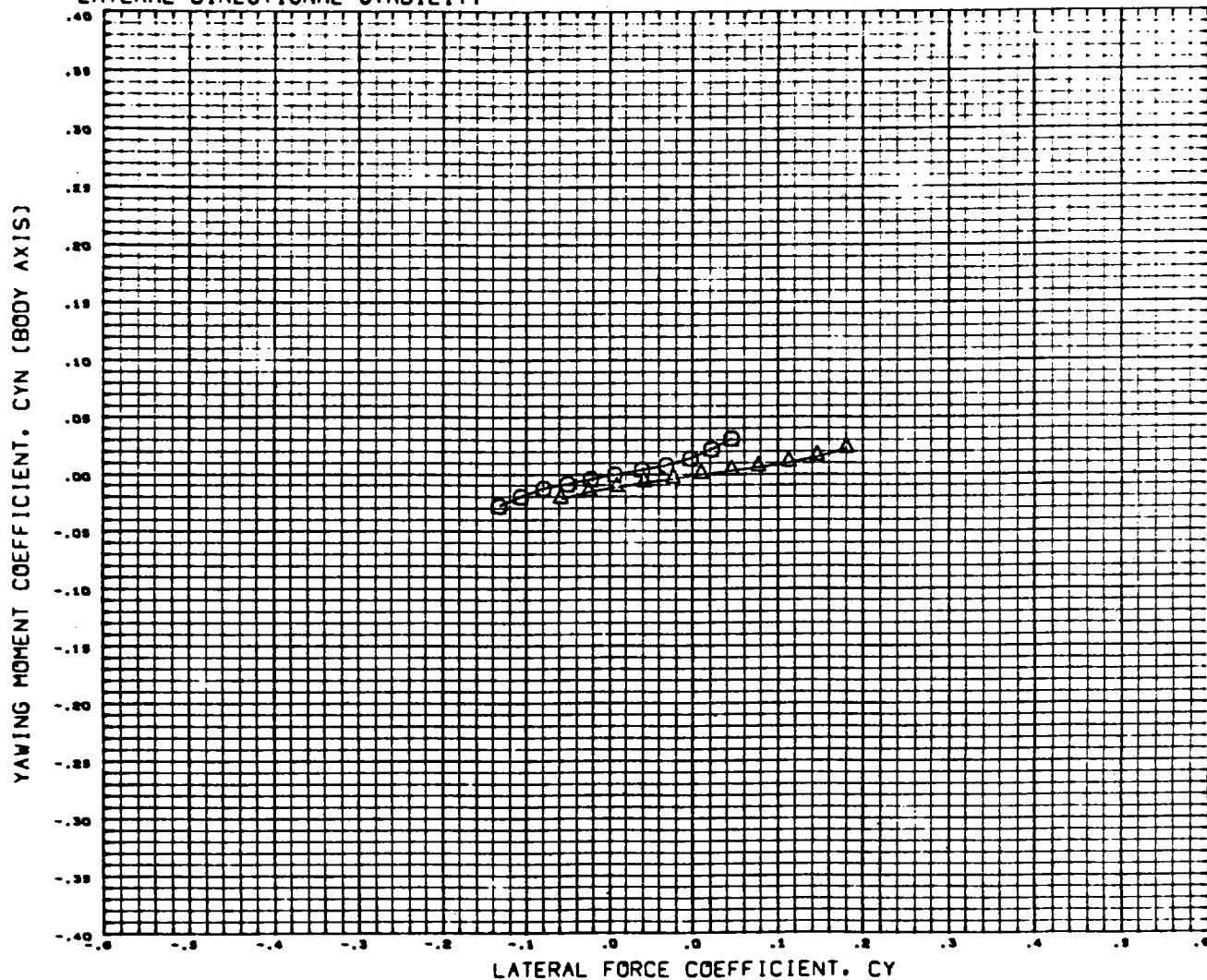
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	BREF	LREF	SCALE
○	0.600	10.000	0.000	0.000	0.000	4.6225	1.9360	80. IN.
△	0.697	0.000	0.000	0.000	0.000	4.3000	2.4000	IN.
		ATLROW	0.000	0.000	0.000	YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

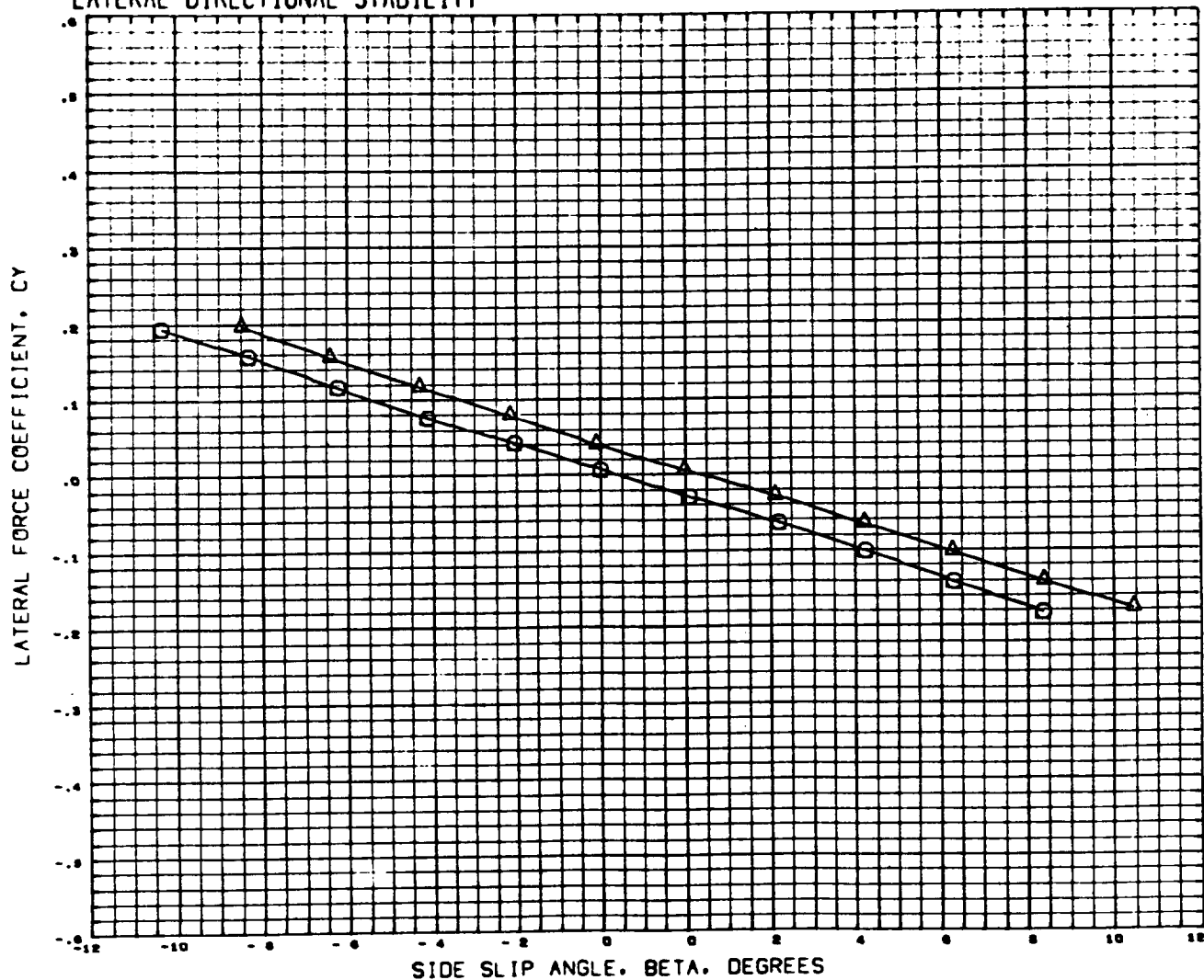


SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
Δ	0.800	ALPHA 10.000 DEL 0.000	SREF 4.6225 30. IN.
	0.897	DER 0.000 ELEVTR 0.000	LREF 1.9360 IN.
		AILRON 0.000 CANARD 0.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.598	0.900	ALPHA	DEL	DER	ELEVTR	BREF	LREF	ZREF
○			10.000	0.000	0.000	0.000	7.7003	3.1700	4.3920
△			0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
			0.000				0.0000	0.0000	0.0023

DATA HIST. CODE 9E

M496-MSFC

AR11981-3

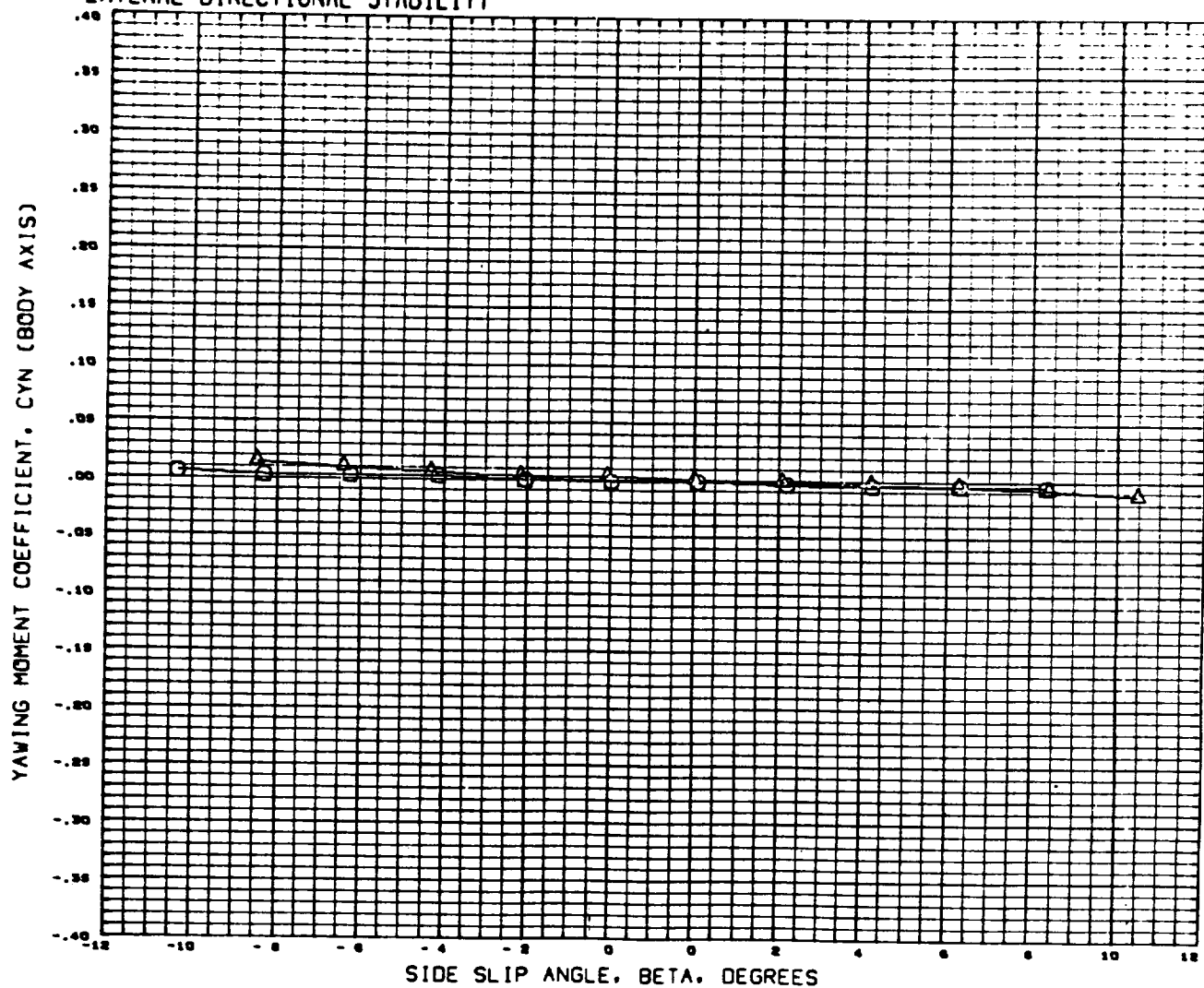
MODEL

W9B2V1

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LATERAL DIRECTIONAL STABILITY



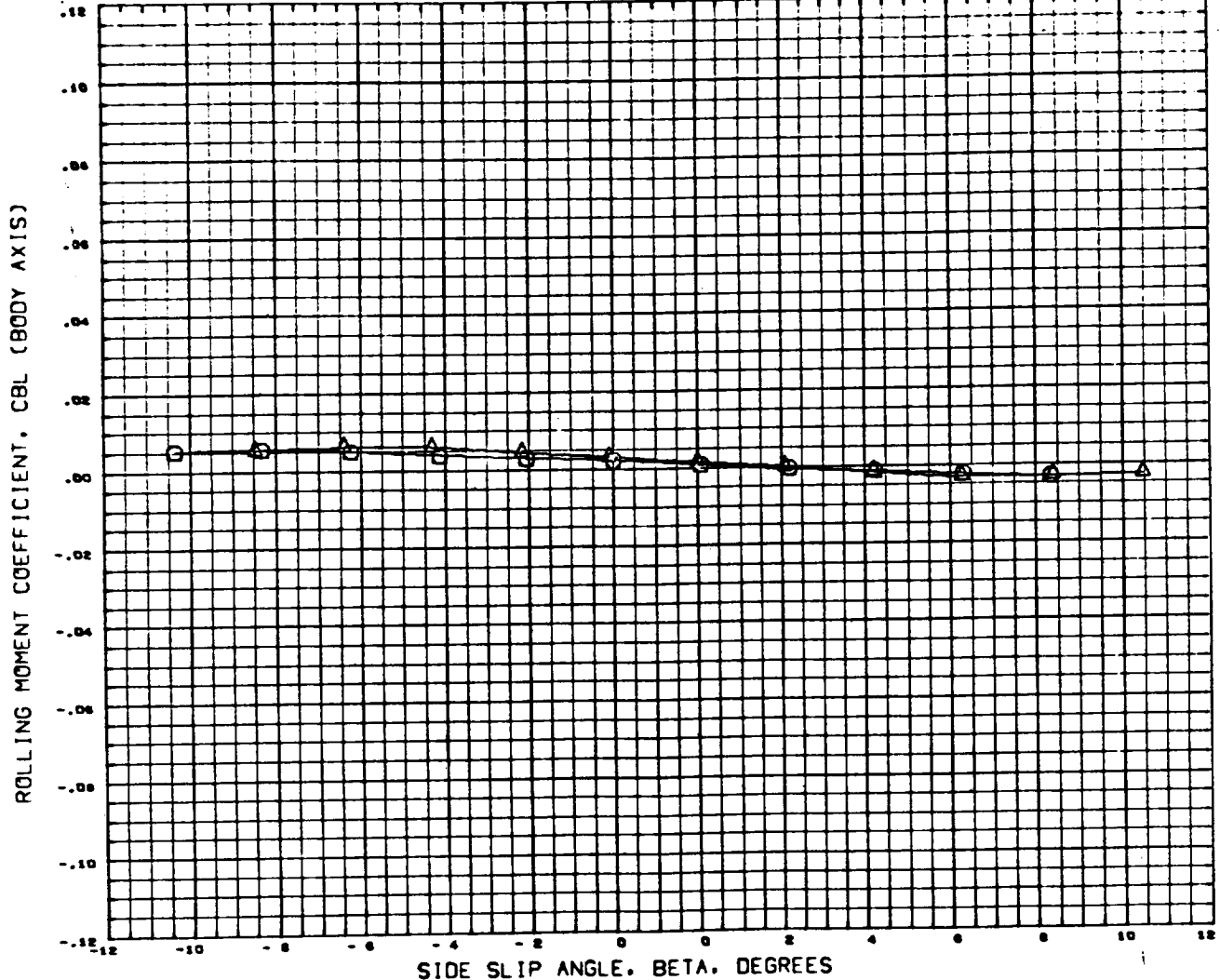
SYMBOL Δ MACH 0.598 ALPHA 10.000 DEL 0.000
 0.900 DER 0.000 ELEVTR 0.000
 AILRON 0.000

REFERENCE INFORMATION
 SREF 7.7005 SQ. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MOOEL W982V1 (E3823G) 06 SEP 72 PAGE 224

LATERAL DIRECTIONAL STABILITY



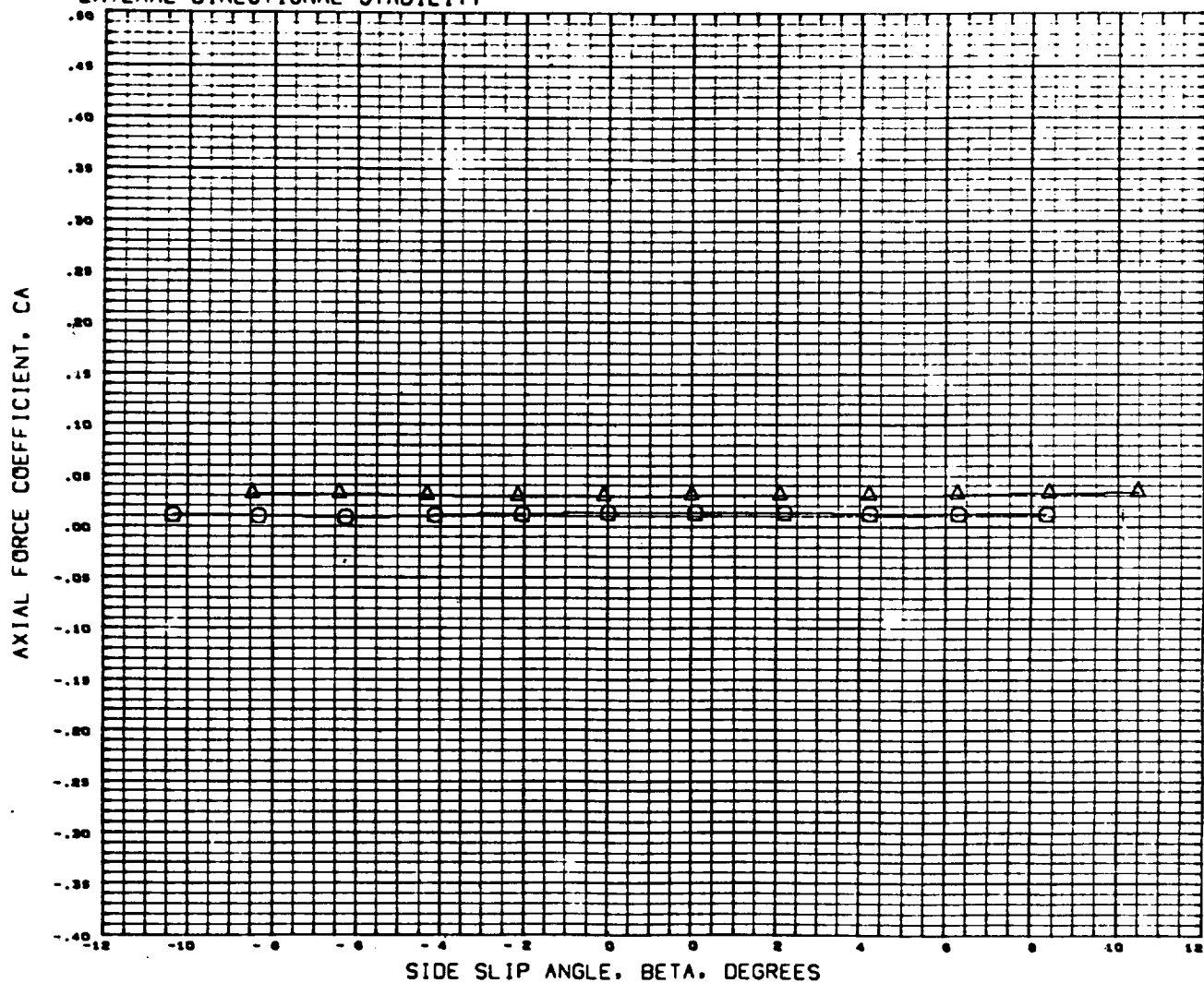
SYMBOL 	MACH	PARAMETRIC VALUES			
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	0.900	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREF	7.7005	sq. in.
LREF	3.1700	in.
BREF	4.3920	in.
YNRP	2.4000	in.
YNRP	0.0000	in.
ZNRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W9B2V1 (E3823G) 06 SEP 72 PAGE 225

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	0.000
○	0.998	10.000	DER	0.000	0.000
△	0.900	0.000	ELEVTR	0.000	
		AILRON	0.000		

REFERENCE INFORMATION		
SREP	7.7005	SQ. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

ARI198I-3

MODEL

W982V1

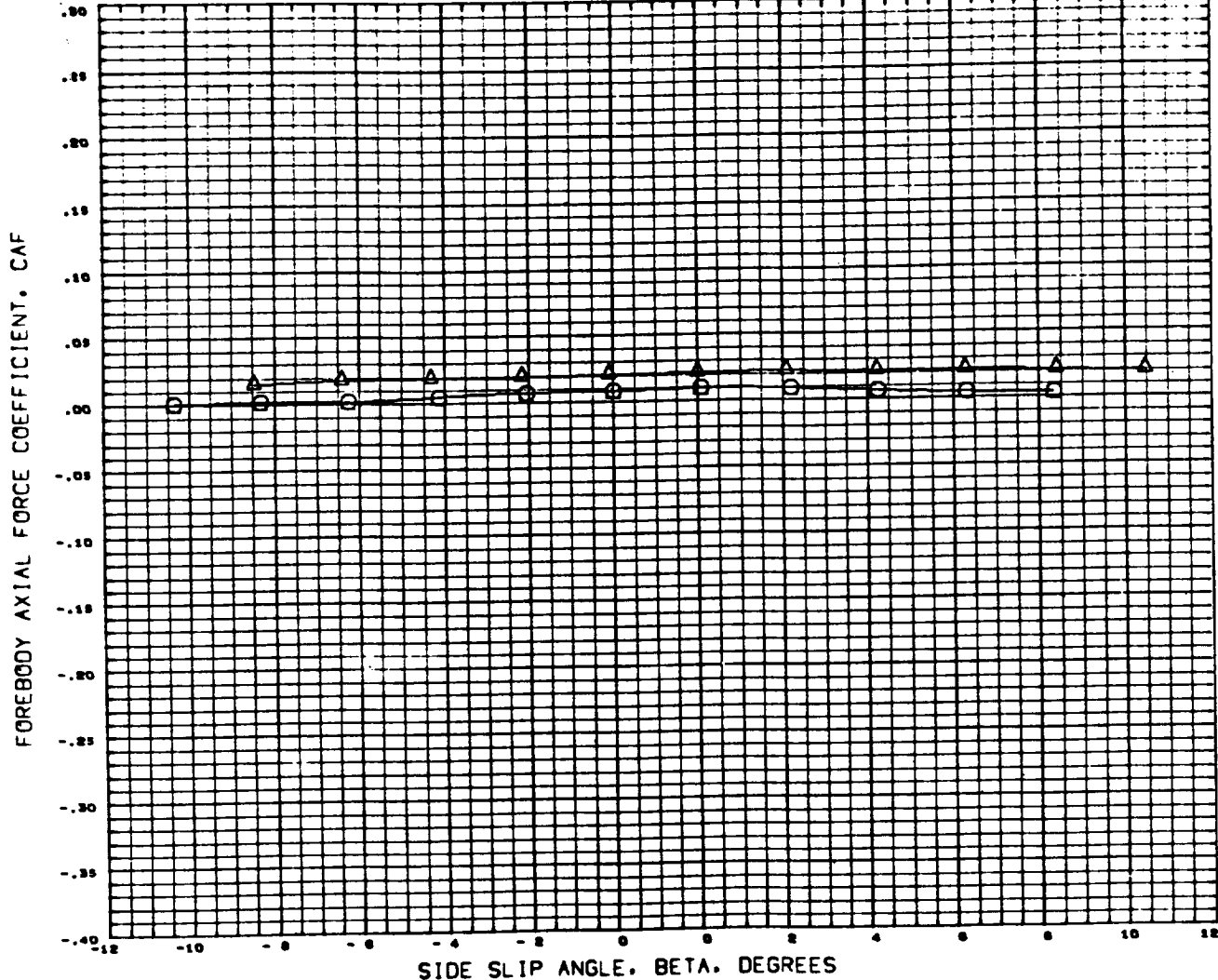
(E3823G)

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LATERAL DIRECTIONAL STABILITY



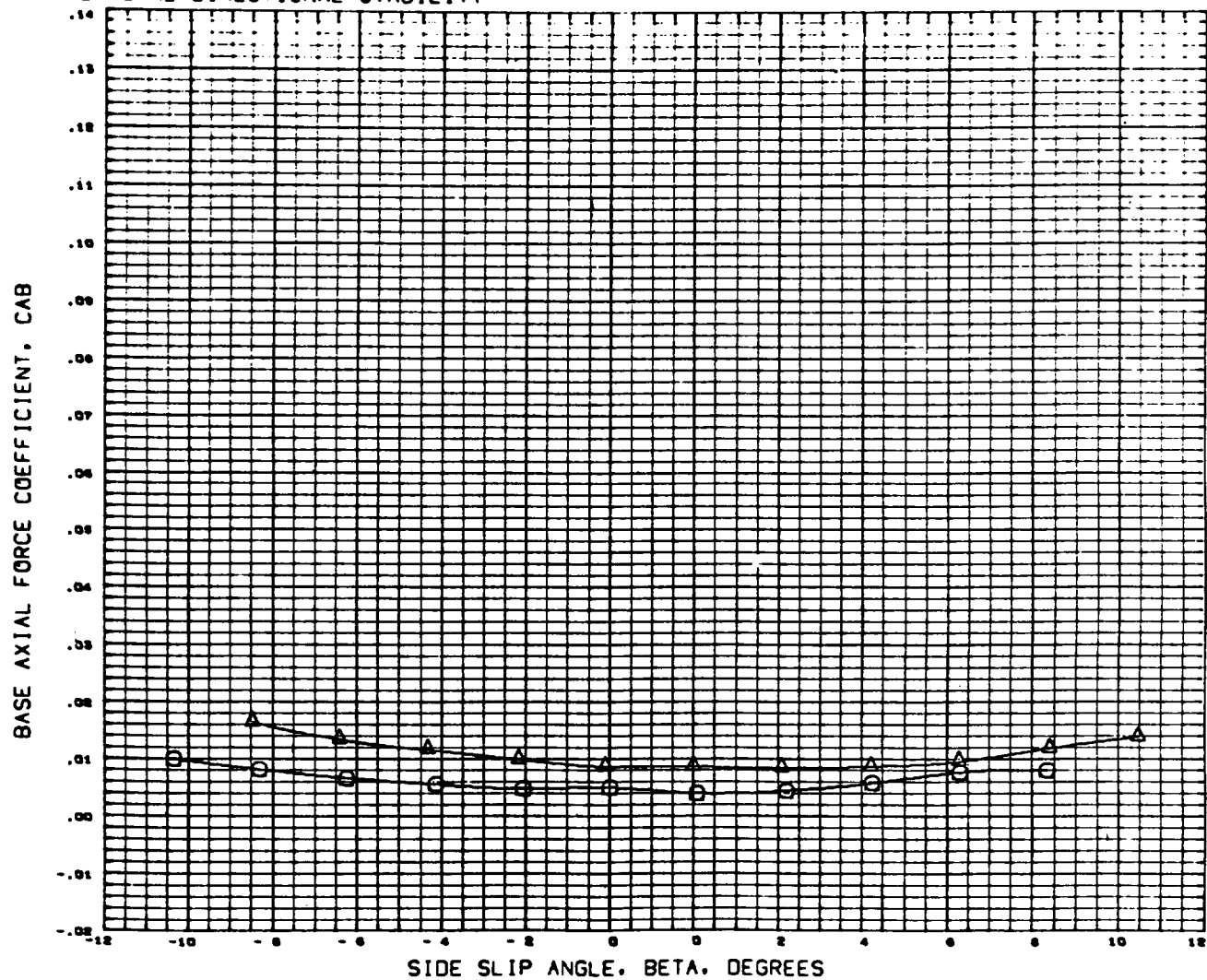
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	0.900	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
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LREF	3.1700	IN.
BREF	4.3820	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982V1 (E3823G) 06 SEP 72 PAGE 227

LATERAL DIRECTIONAL STABILITY



SYMBOL Δ \bigcirc MACH 0.598 0.900 ALPHA 10.000 DER 0.000 AILRON 0.000 PARAMETRIC VALUES DEL 0.000 ELEVTR 0.000

REFERENCE INFORMATION
 SREF 7.7005 99.1N.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0023

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W982V1

(E3823G)

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LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SYMBOL ○	MACH	ALPHA	PARAMETRIC VALUES		DEL
	0.998	10.000	0.000	0.000	0.000
	0.900	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
BREF	7.7005	50. IN.
LRFP	3.1700	IN.
BRFP	4.3920	IN.
YHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W9B2V1

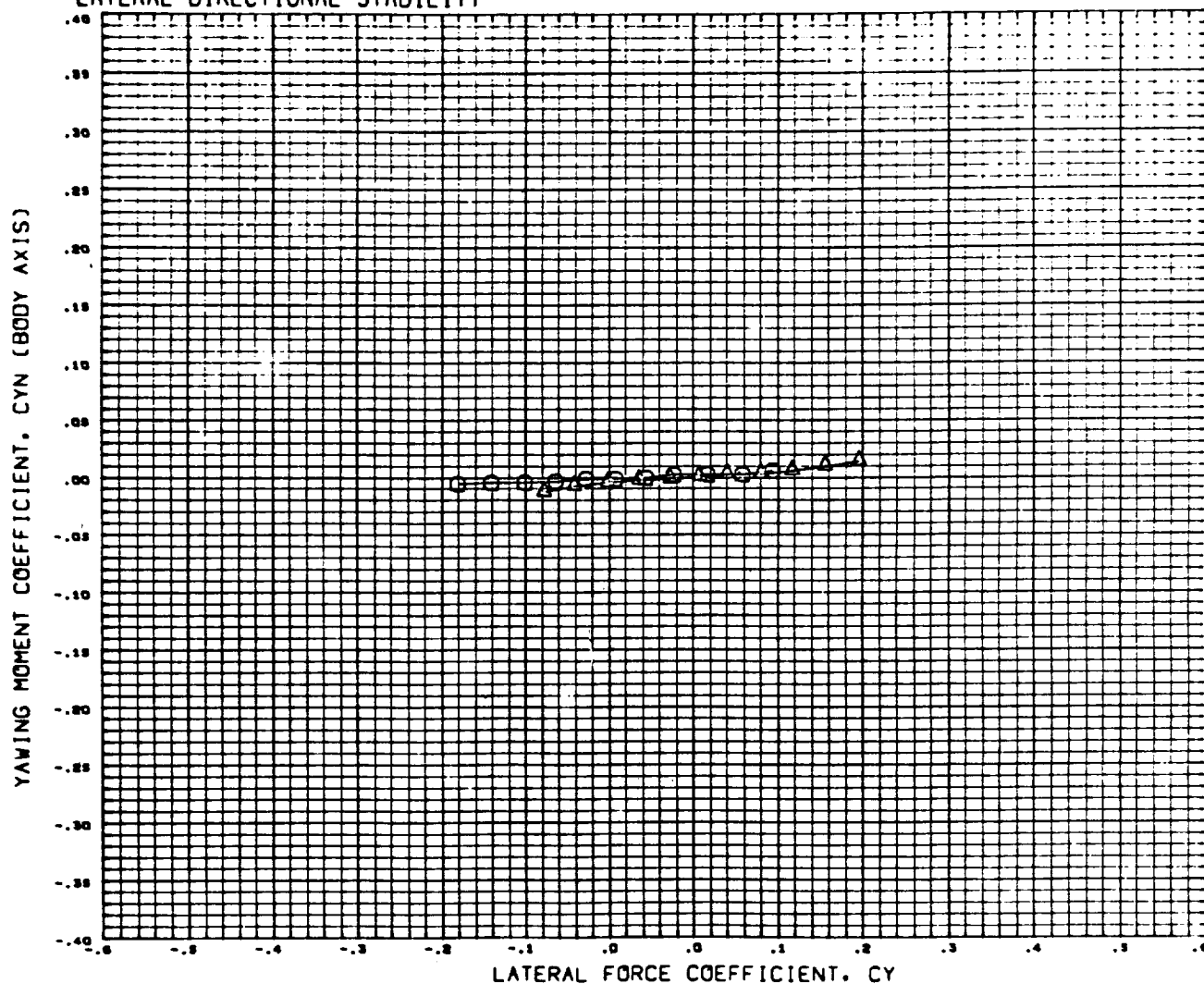
(E3823G)

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PAGE

229

LATERAL DIRECTIONAL STABILITY

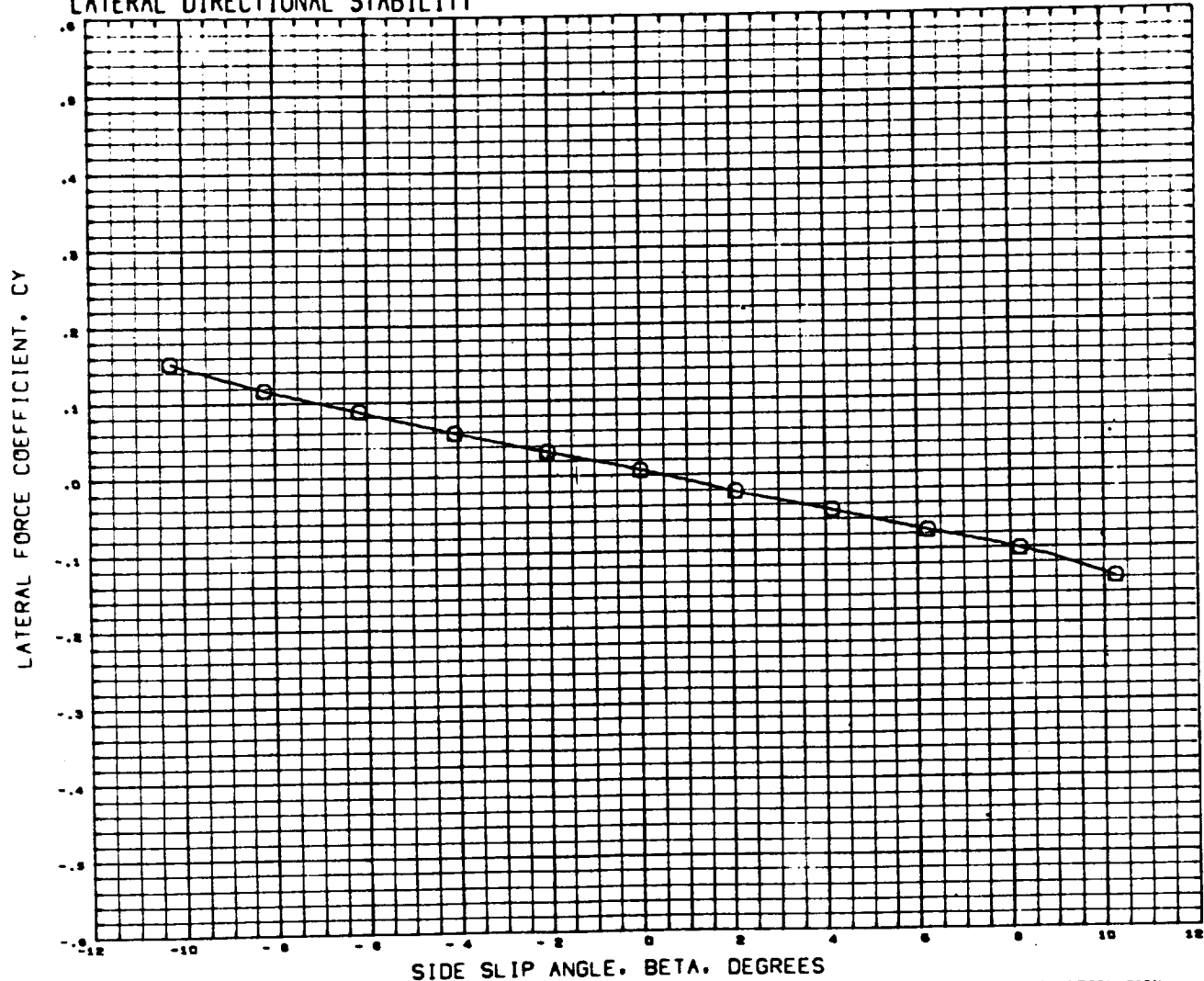


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O Δ	0.998	ALPHA	10.000	DEL	0.000	SREF	7.7005	52. IN.
	0.900	DER	0.000	ELEVTR	0.000	LREF	3.1700	1N.
		AILRON	0.000			BREF	4.3920	1N.
						XMRP	2.4000	1N.
						YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W9B2V1 (E3823G) 06 SEP 72 PAGE 230

LATERAL DIRECTIONAL STABILITY



SYMBOL MACH
○ 0.002

PARAMETRIC VALUES
ALPHA 10.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATTLOW 0.000 CANARD 0.000

REFERENCE INFORMATION
BREF 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W9B2C12V1

(E3824G) 06 SEP 72

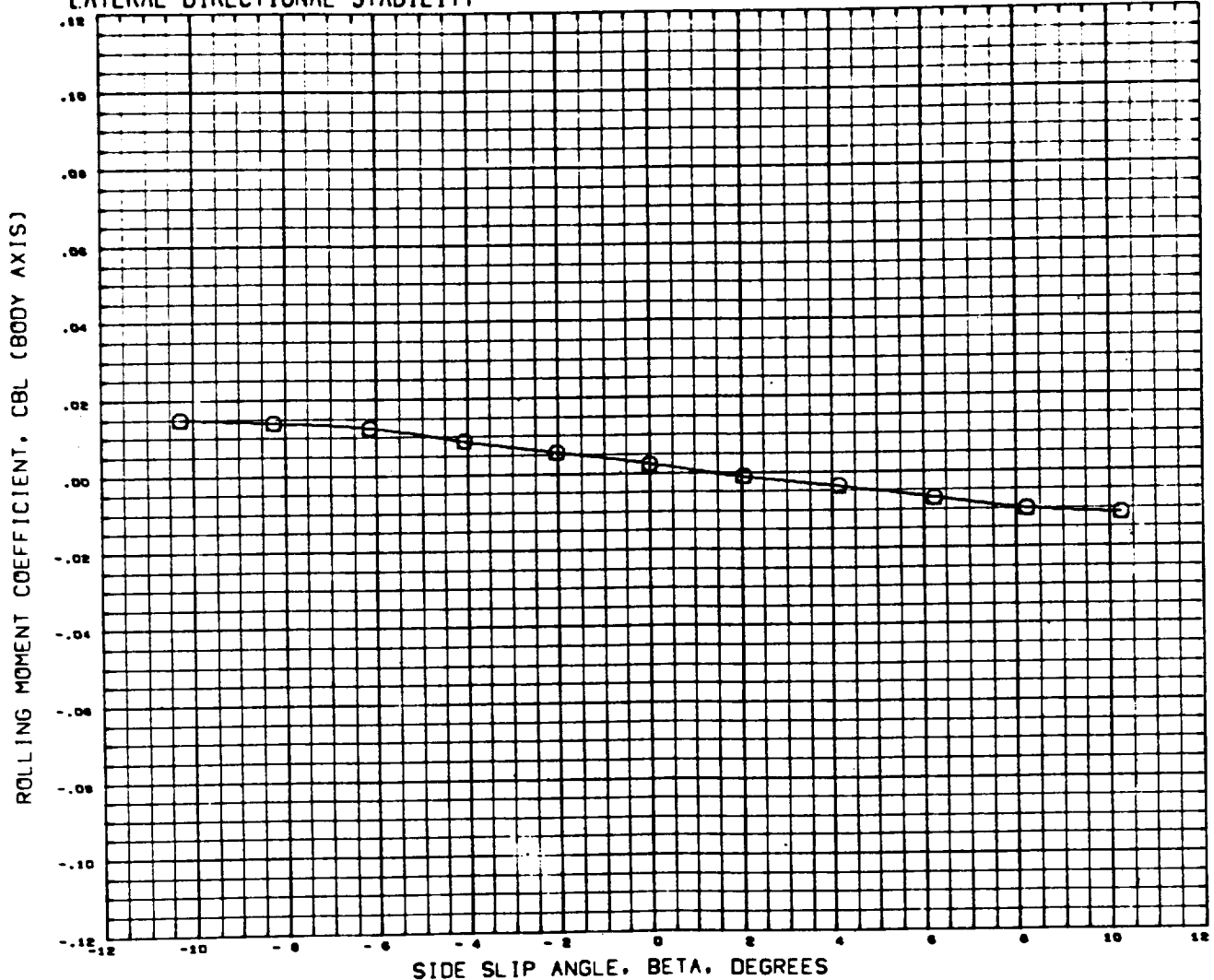
PAGE 231

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LREP	3.1700	IN.
		AILRON	0.000	CANARD	0.000	BREP	4.3820	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY

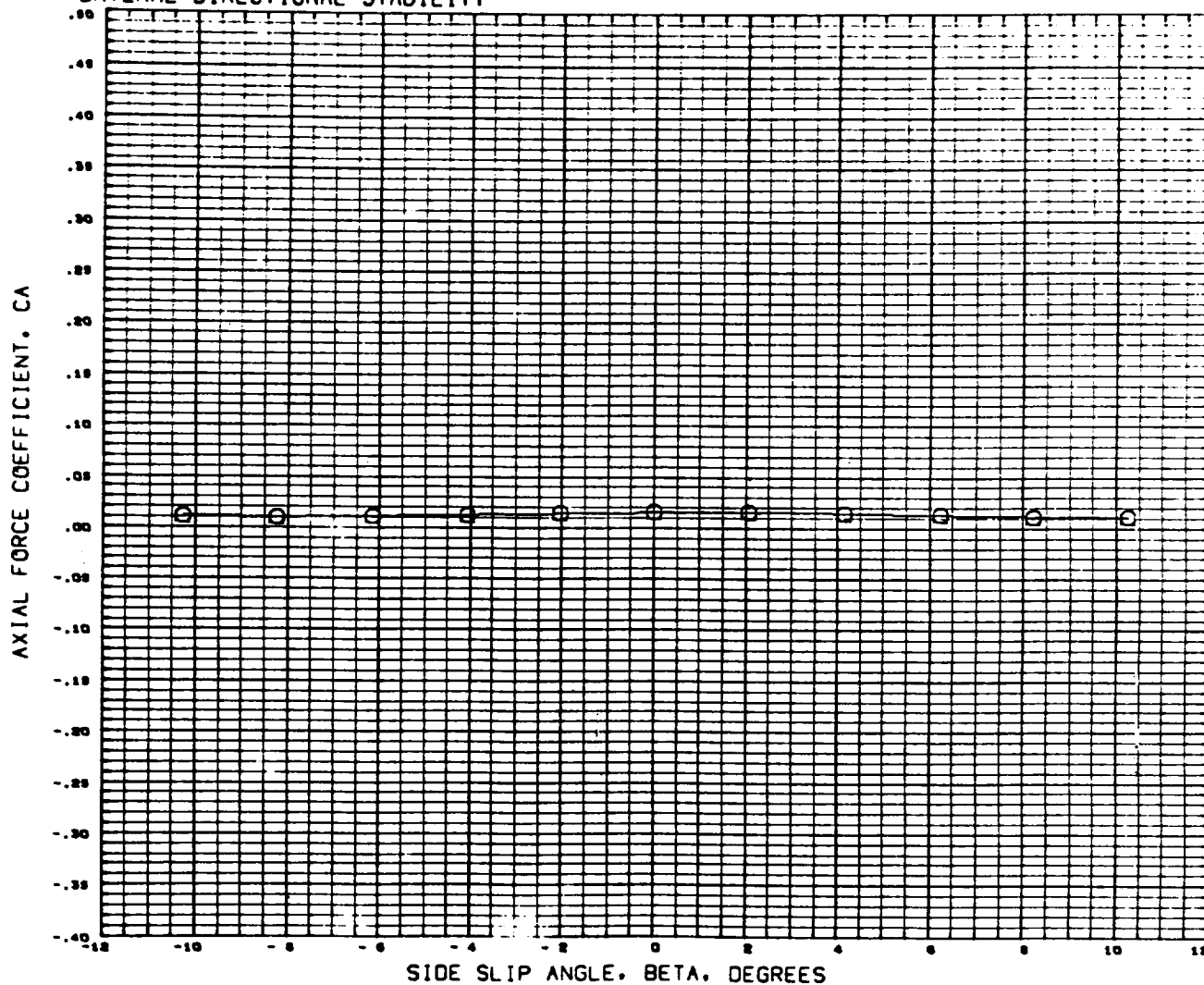


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		ALPHA	DEL	ELEVTR	CANARD	SRF	SG, IN.
○	0.002	10.000	0.000	0.000	0.000	LRP	3.1700 IN.
		0.000	0.000	0.000		BRP	4.3920 IN.
		0.000	0.000	0.000		YHRP	2.4000 IN.
						ZHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982C12V1 (E3824G) 06 SEP 72 PAGE 233

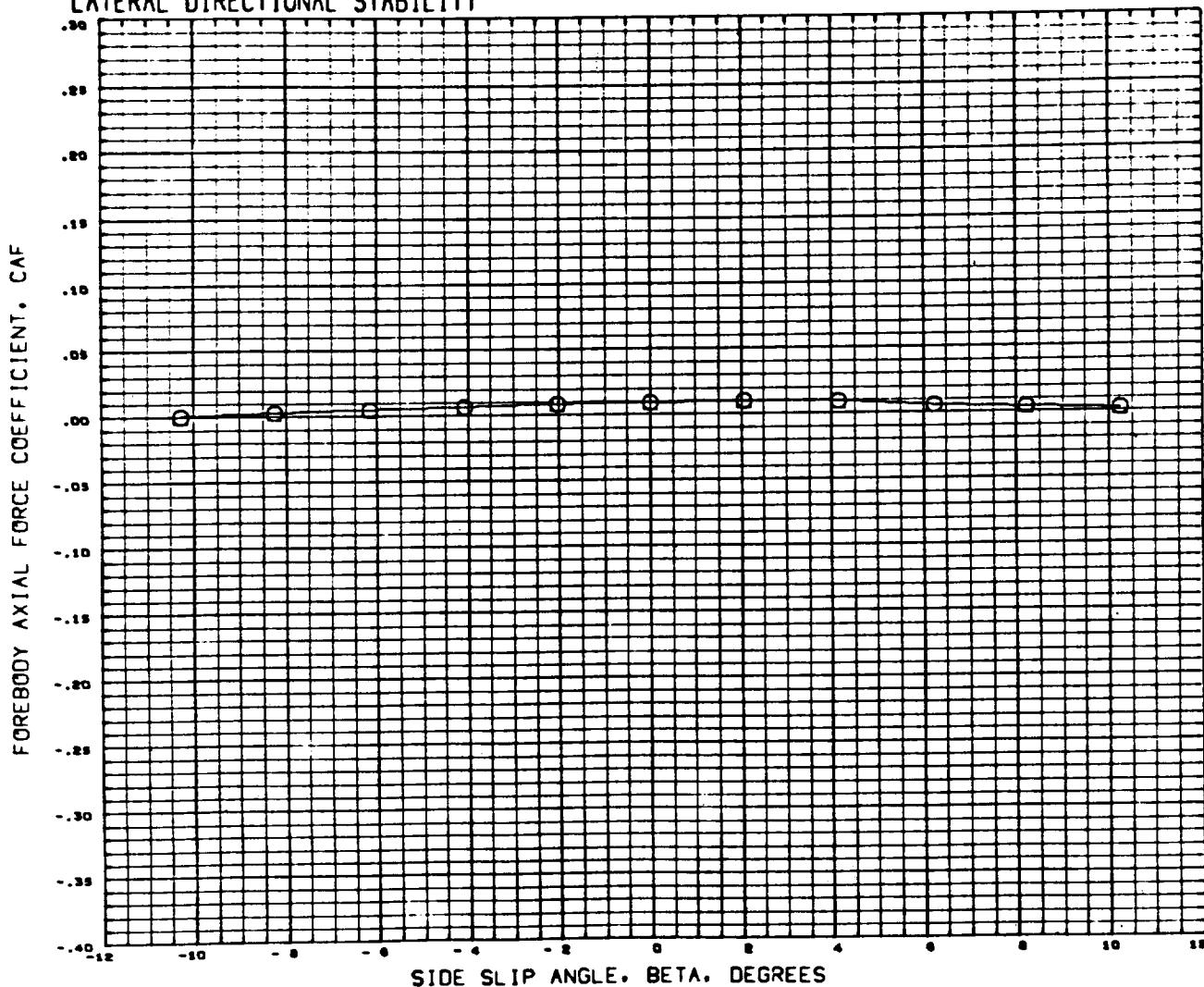
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		AILRON	0.000	CANARD	0.000	BREF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0023	IN.

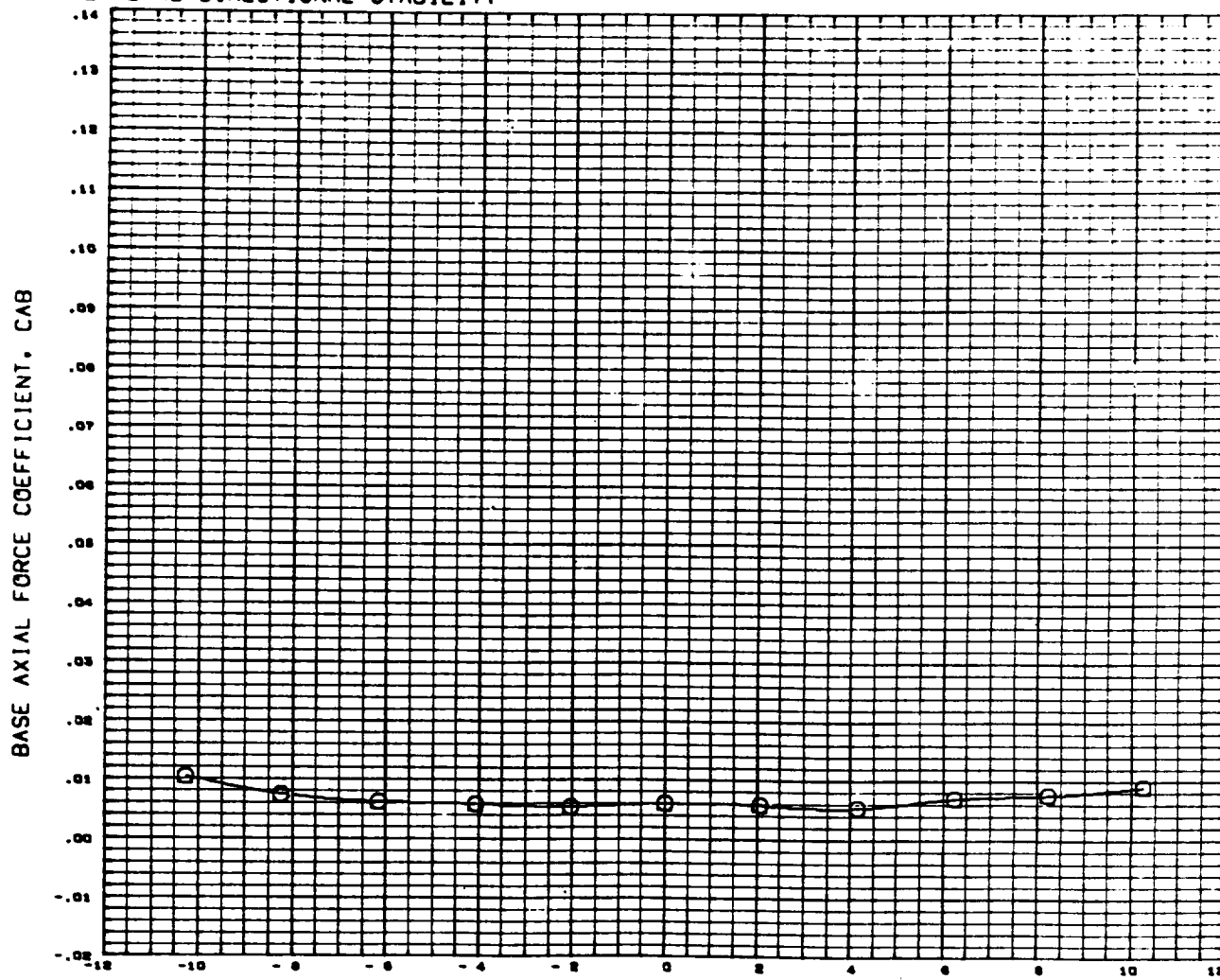
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LATERAL DIRECTIONAL STABILITY



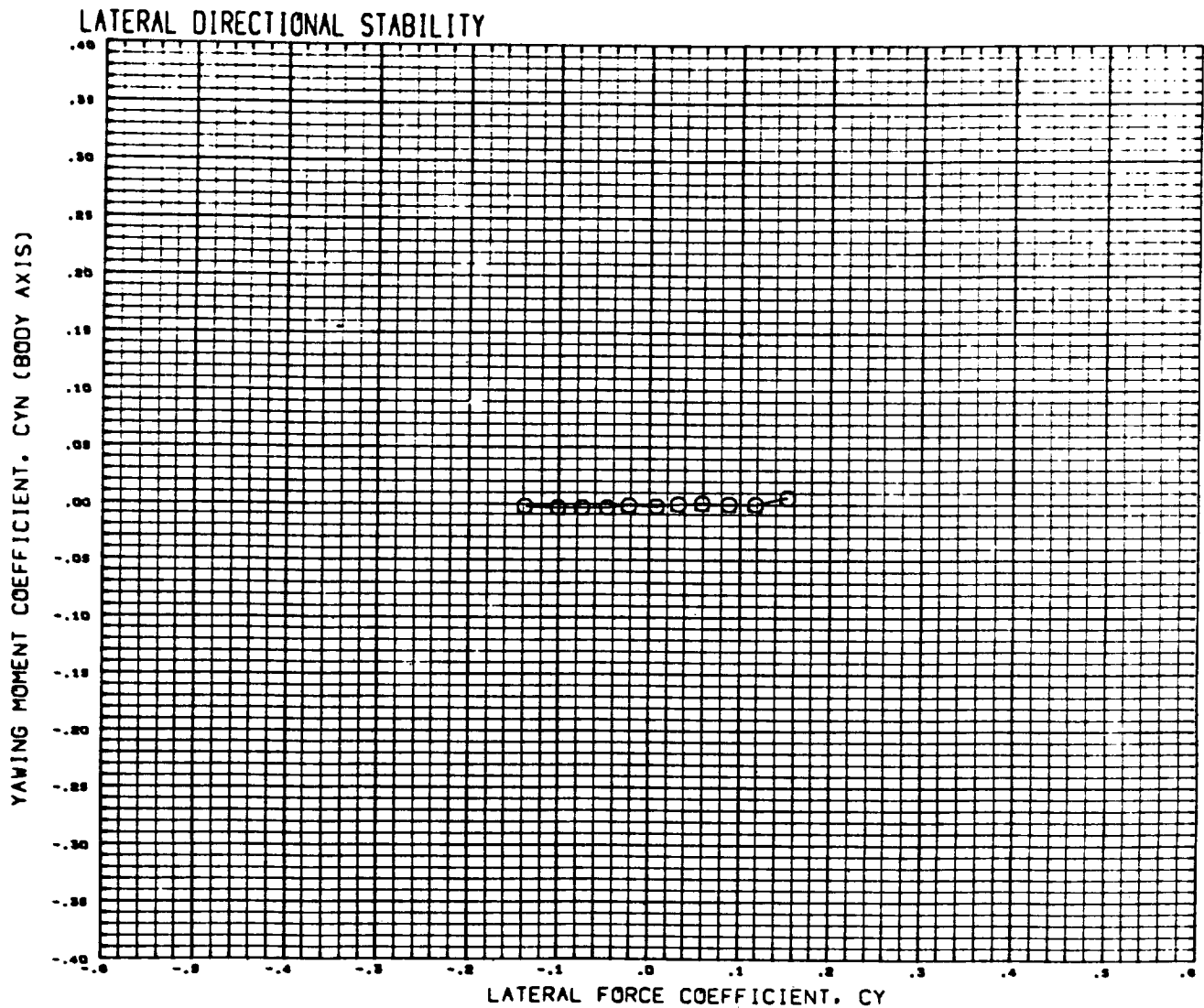
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LRFP	SRFP
○	0.602	10.000	0.000	0.000	0.000	7.7005	3.1700	30.1N.
		DER				SRFP	4.3820	1N.
		ATLRON				YMRP	2.4000	1N.
						YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
						SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		0.602		ALPHA	10.000	DEL	0.000	SREF	7.7003	SQ. IN.
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				AILRON	0.000	CANARD	0.000	BREF	4.3920	IN.
								XHRP	2.4000	IN.
								YHRP	0.0000	IN.
								ZHRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

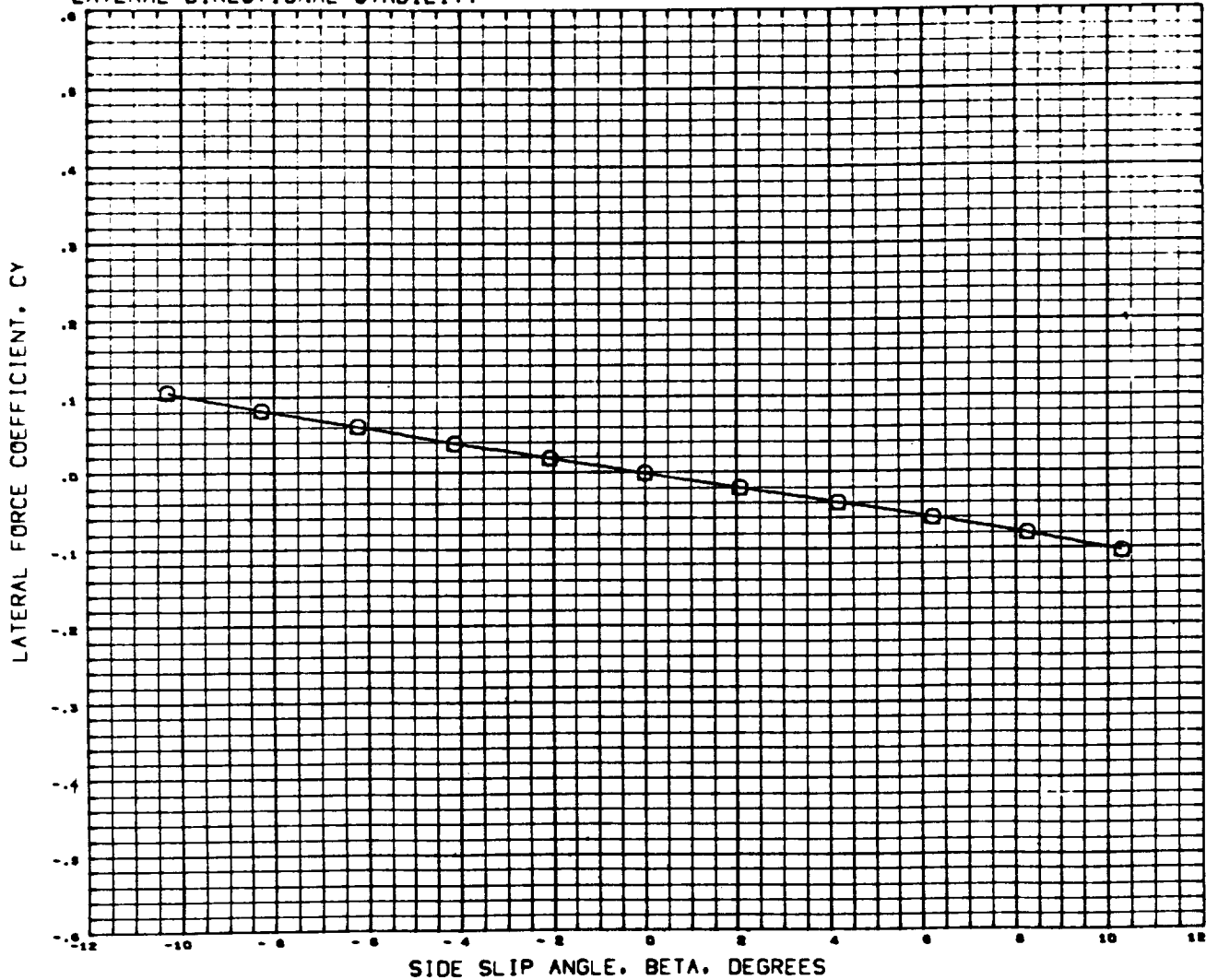


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.602	ALPHA	10.000	DEL	0.000	SREF	7.7005 sq. in.
		DER	0.000	ELEVTR	0.000	LREF	3.1700 in.
		AILRON	0.000	CANARD	0.000	BREF	4.3920 in.
						XMRP	2.4000 in.
						YMRP	0.0000 in.
						ZMRP	0.0000 in.
						SCALE	0.0023

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

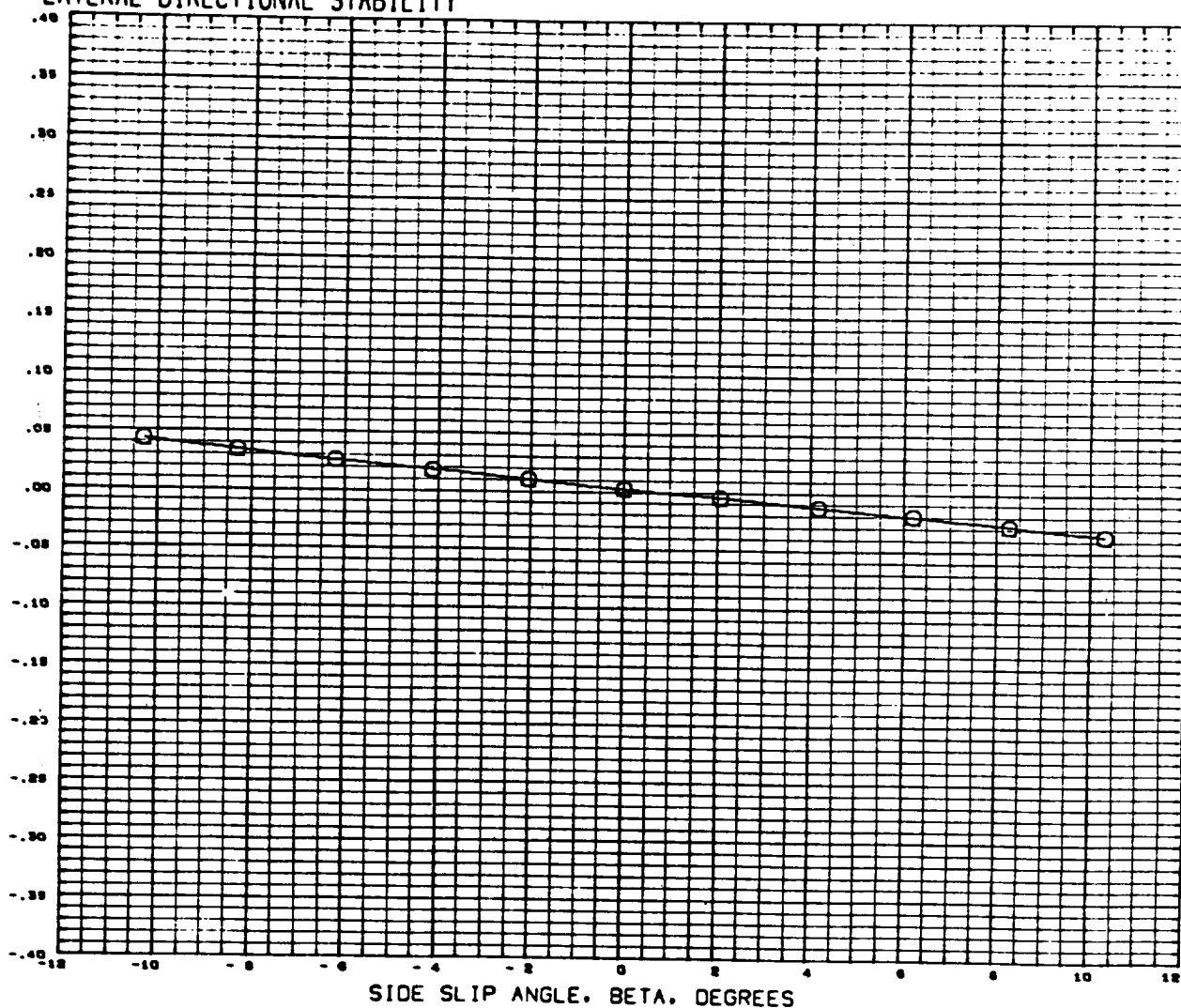


SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		0.998		ALPHA	10.000	DEL	0.000	SRFP	7.7005	sq. in.
				DER	0.000	ELEVTR	0.000	LRFP	3.1700	in.
				ATLRON	0.000			BRFP	4.3920	in.
								XMRP	2.4000	in.
								YMRP	0.0000	in.
								ZMRP	0.0000	in.
								SCALE	0.0025	

DATA HIST. CODE DE

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SIDE SLIP ANGLE, BETA, DEGREES

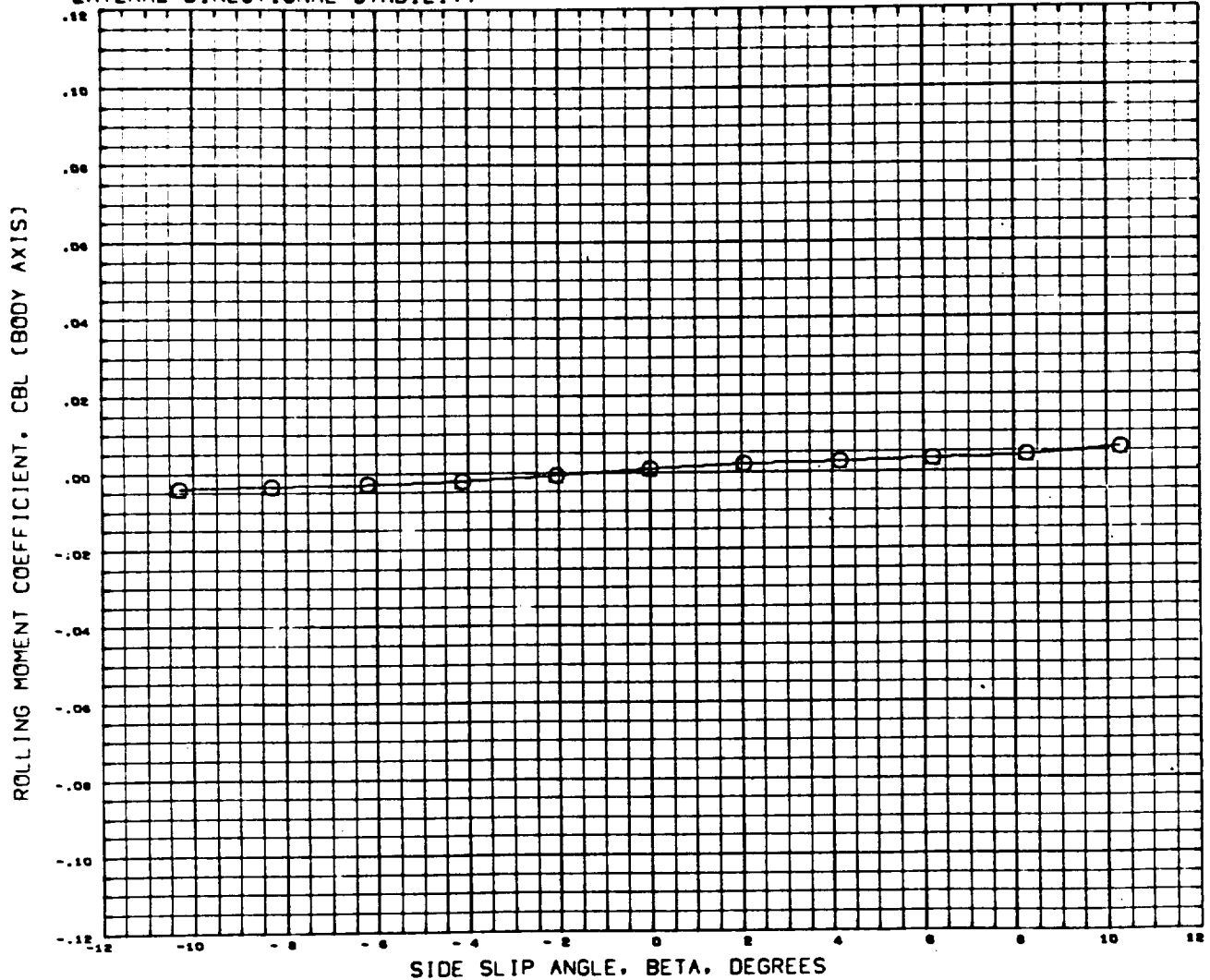
SYMBOL	MACH	PARAMETRIC VALUES			
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		DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREF	7.7000	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982 (E3822G) 06 SEP 72 PAGE 240

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	SCALE	BREF	LREF	BREF
○	0.998	10.000	0.000	0.000	0.000	7.7005	3.1700	4.3920
		0.000				2.4000		0.0000
		0.000				0.0000		0.0025

DATA HIST. CODE 9E

M496-MSFC

AR11981-3

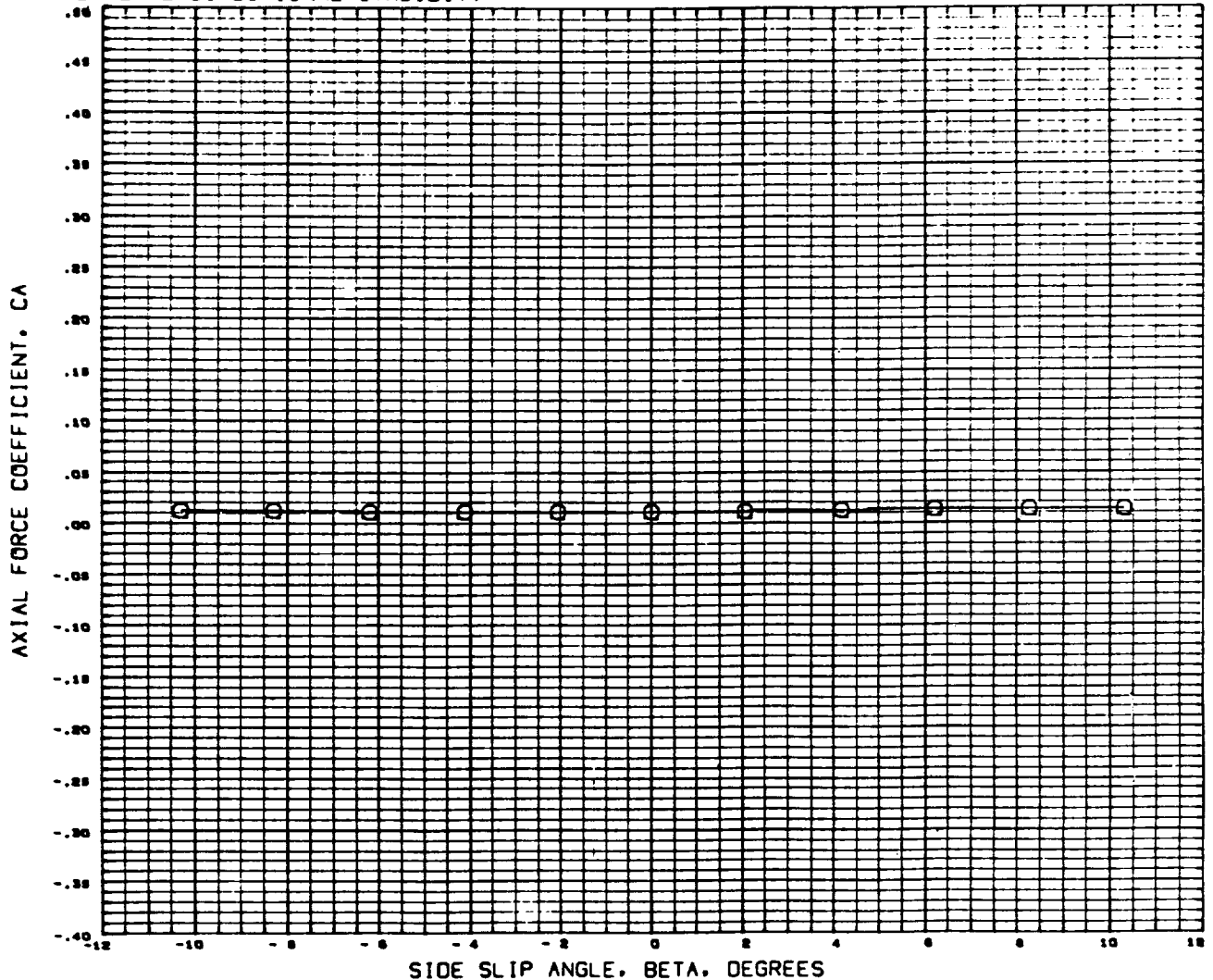
MODEL

W982

(E3822G) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY

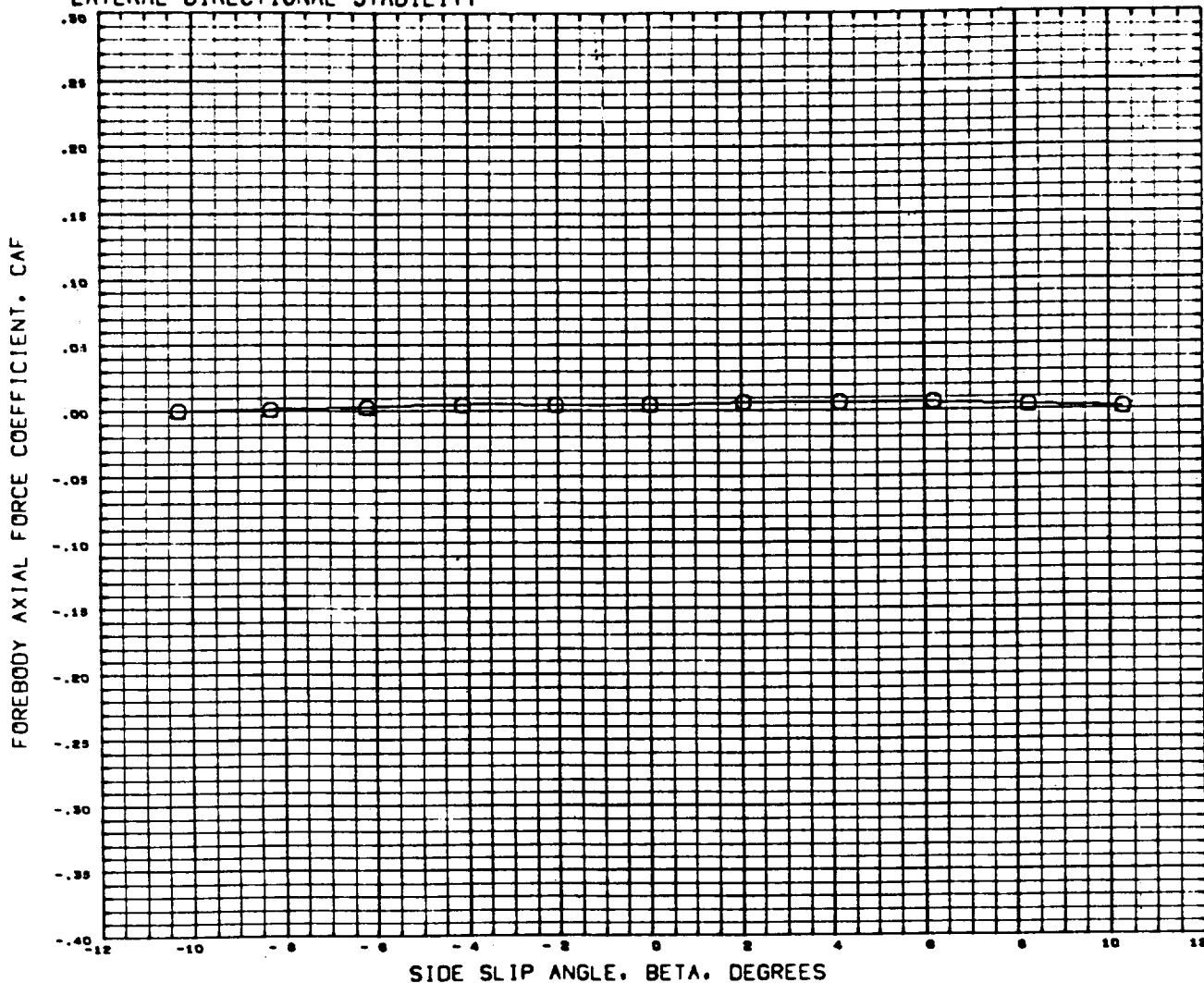


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	SCALE		
○	0.998	10.000	0.000	0.000		SREF	7.7005 IN.
		DER	0.000	0.000		LREF	3.1700 IN.
		ATLRON	0.000			BREF	4.3920 IN.
						YHRP	2.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE 0E

M496-MSFC AR11981-3 MODEL W9B2 (E3822G) 06 SEP 72 PAGE 242

LATERAL DIRECTIONAL STABILITY



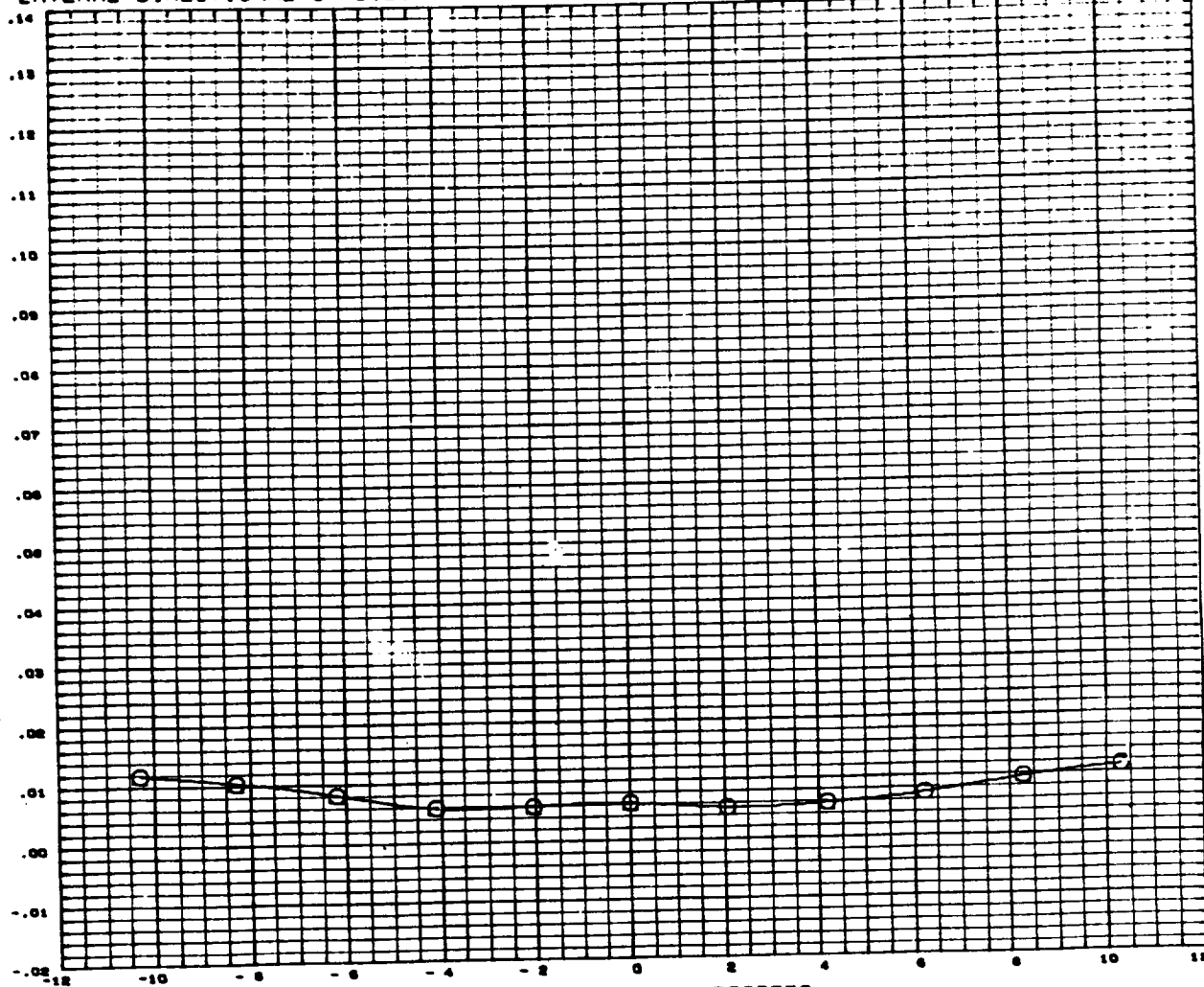
PARAMETRIC VALUES				REFERENCE INFORMATION		
SYMBOL	MACH	ALPHA	DEL	SREF	7.7005	50. IN.
○	0.598	10.000	0.000	LREF	3.1700	IN.
		DER	ELEVTR	BREF	4.3920	IN.
		AILRON	0.000	XMRP	2.4000	IN.
				YMRP	0.0000	IN.
				ZMRP	0.0000	IN.
				SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982 (E3822G) 06 SEP 72 PAGE 243

LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
○	0.998	ALPHA	10.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000		

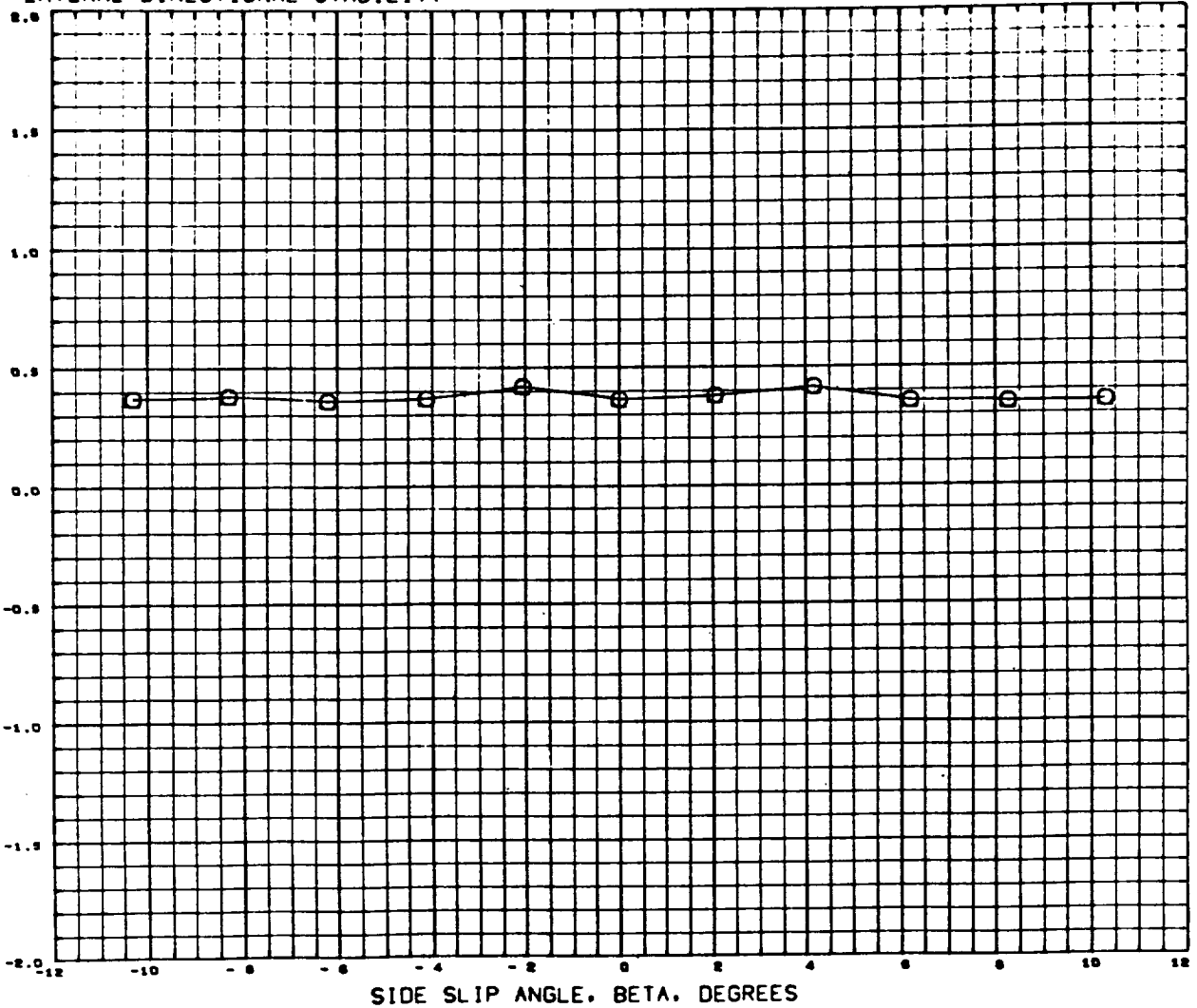
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SREF	7.7003	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982 (E3822G) 06 SEP 72 PAGE 244

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		0.590		ALPHA	10.000	DEL	0.000	BREF	7.9003	50. IN.
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				ATLRON	0.000			BREF	4.3920	IN.
								YHRP	2.4000	IN.
								YHRP	0.0000	IN.
								ZHRP	0.0000	IN.
								SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

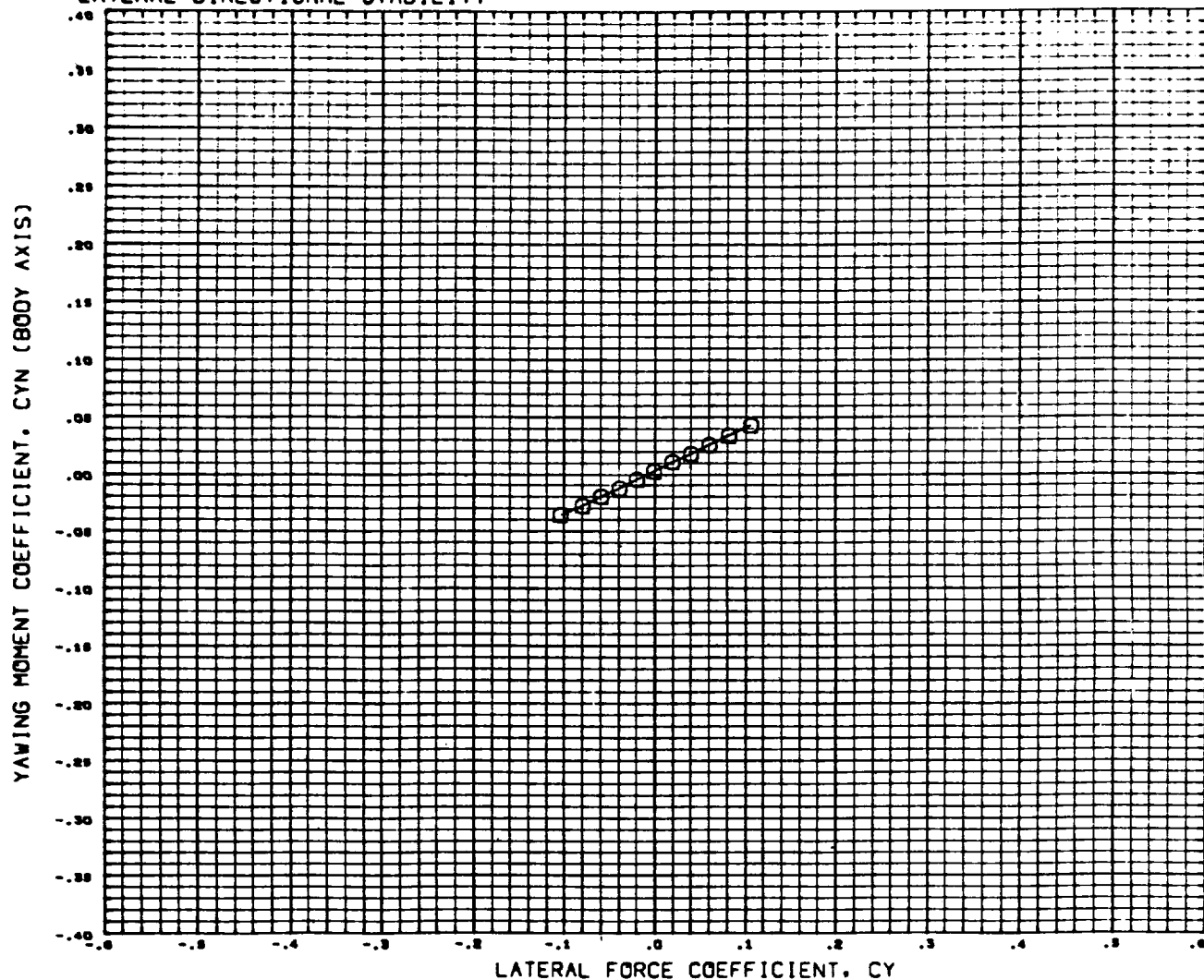
MODEL

W982

(E3822G) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY

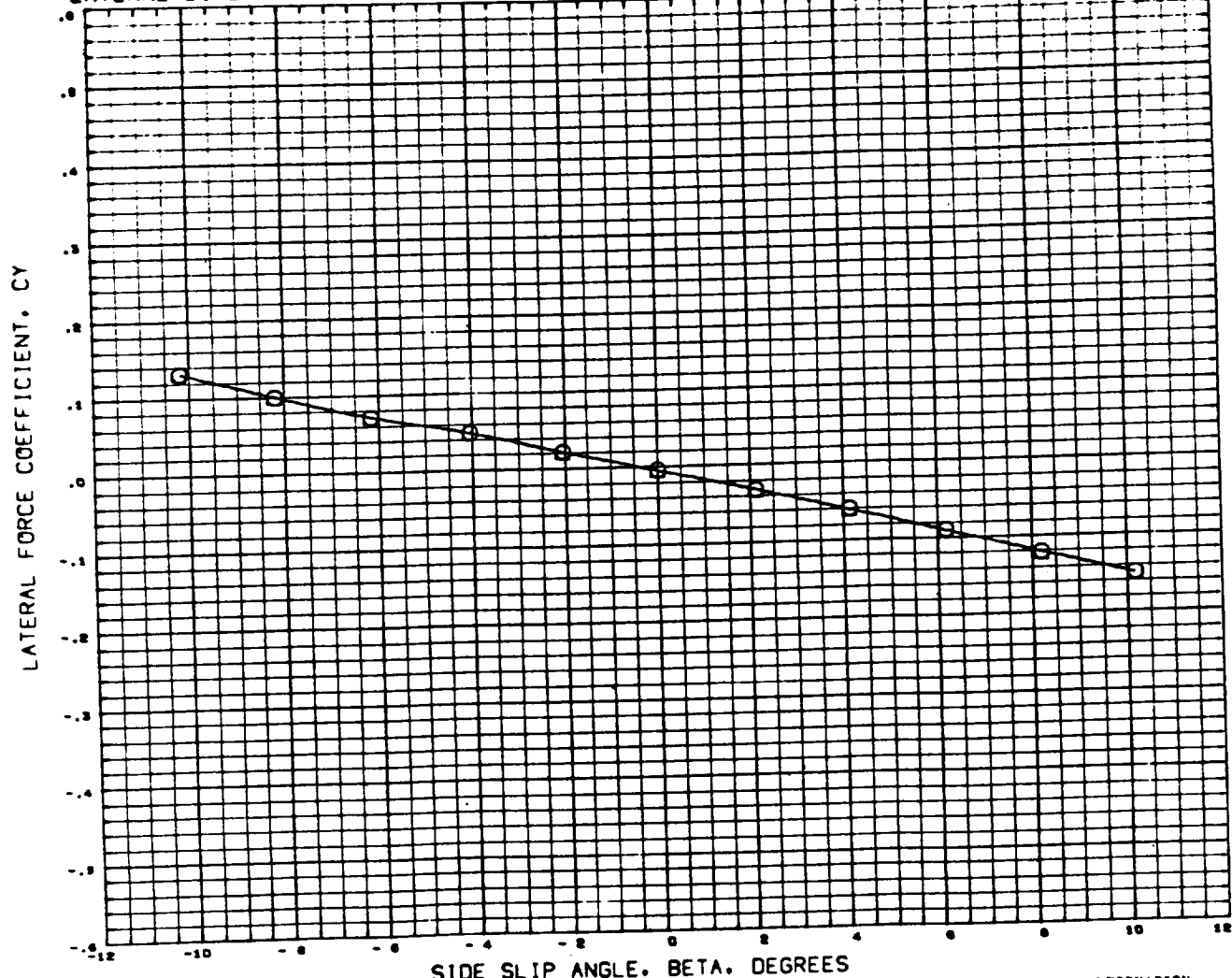


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR		SREP		sq. in.
○	0.596	10.000	0.000	0.000		LRP	3.1700	in.
		DER	0.000			BRP	4.3920	in.
		AILRON	0.000			XHRP	2.4000	in.
						YHRP	0.0000	in.
						ZHRP	0.0000	in.
						SCALE	0.0025	

DATA HIST. CODE *E

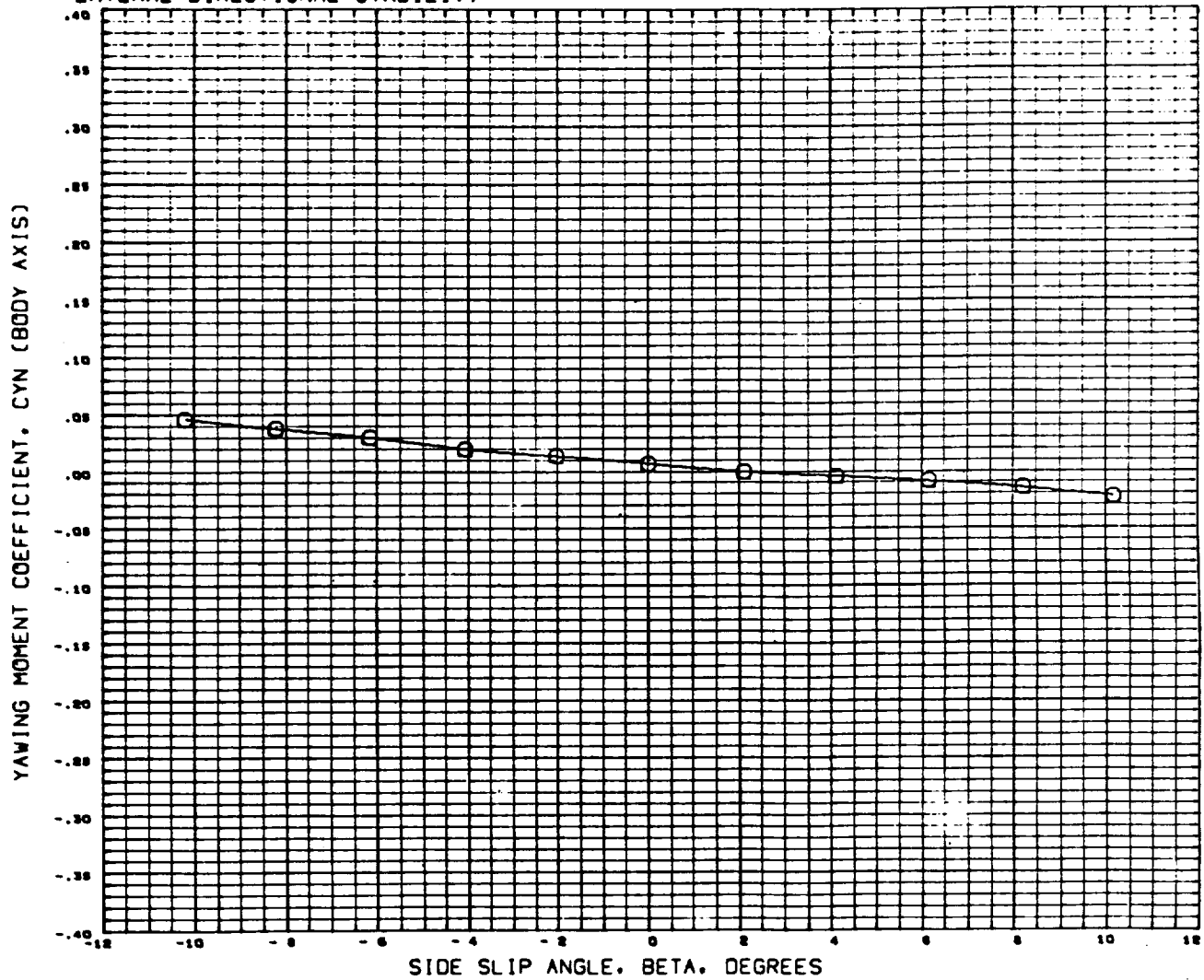
M496-MSFC AR11981-3 MODEL W9B2 (E3822G) 06 SEP 72 PAGE 246

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	AILRON	SREF	LREF	ZREF
○	0.602	10.000	0.000	0.000	0.000	4.9327	1.8980	2.4000
		DER	ELEVTR			2.4000	0.0000	0.0000
		AILRON				0.0000	0.0025	

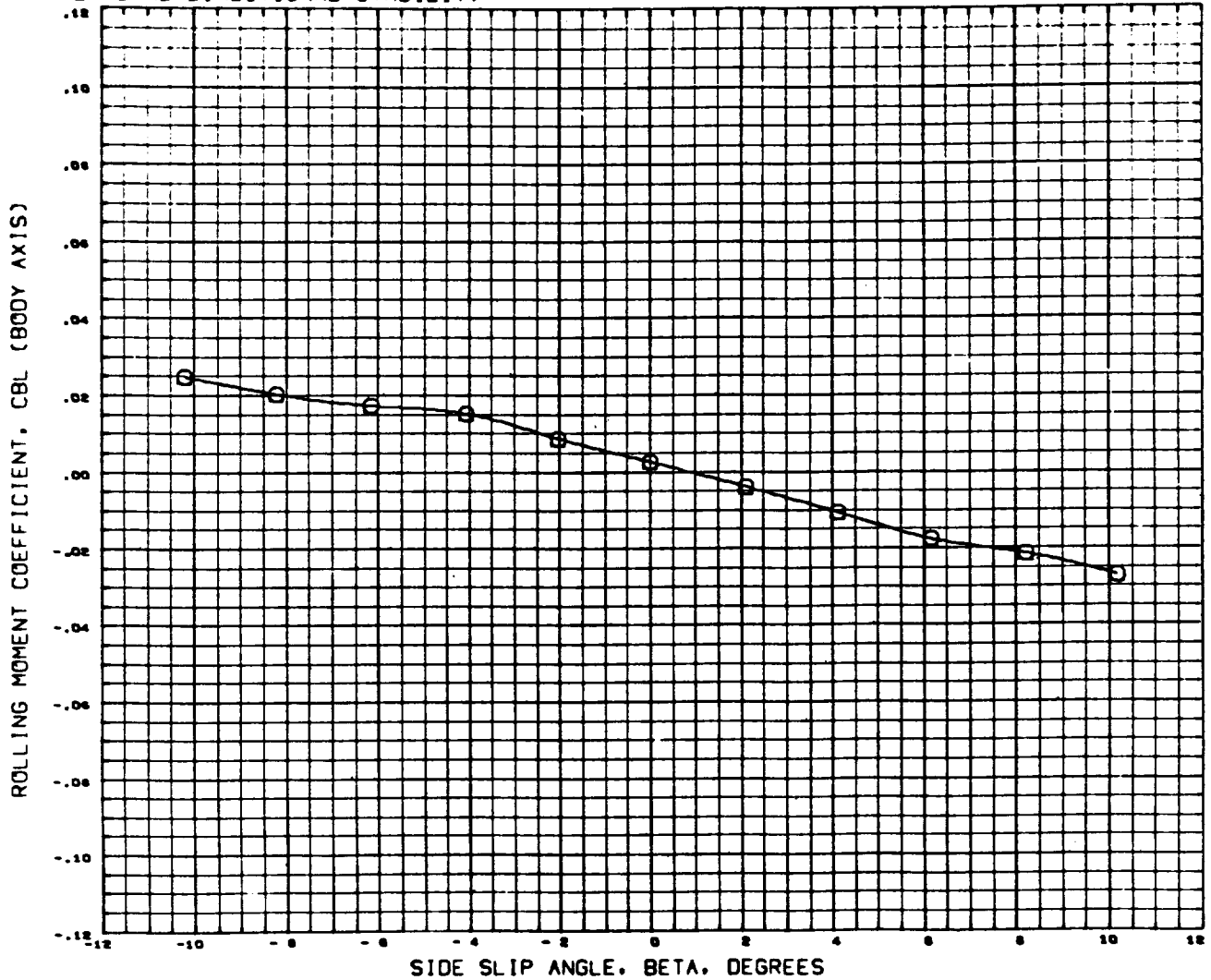
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.602	ALPHA	10.000	OEL	0.000	SREP	4.9327	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREP	1.6980	IN.
		AILRON	0.000			BREP	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0023	

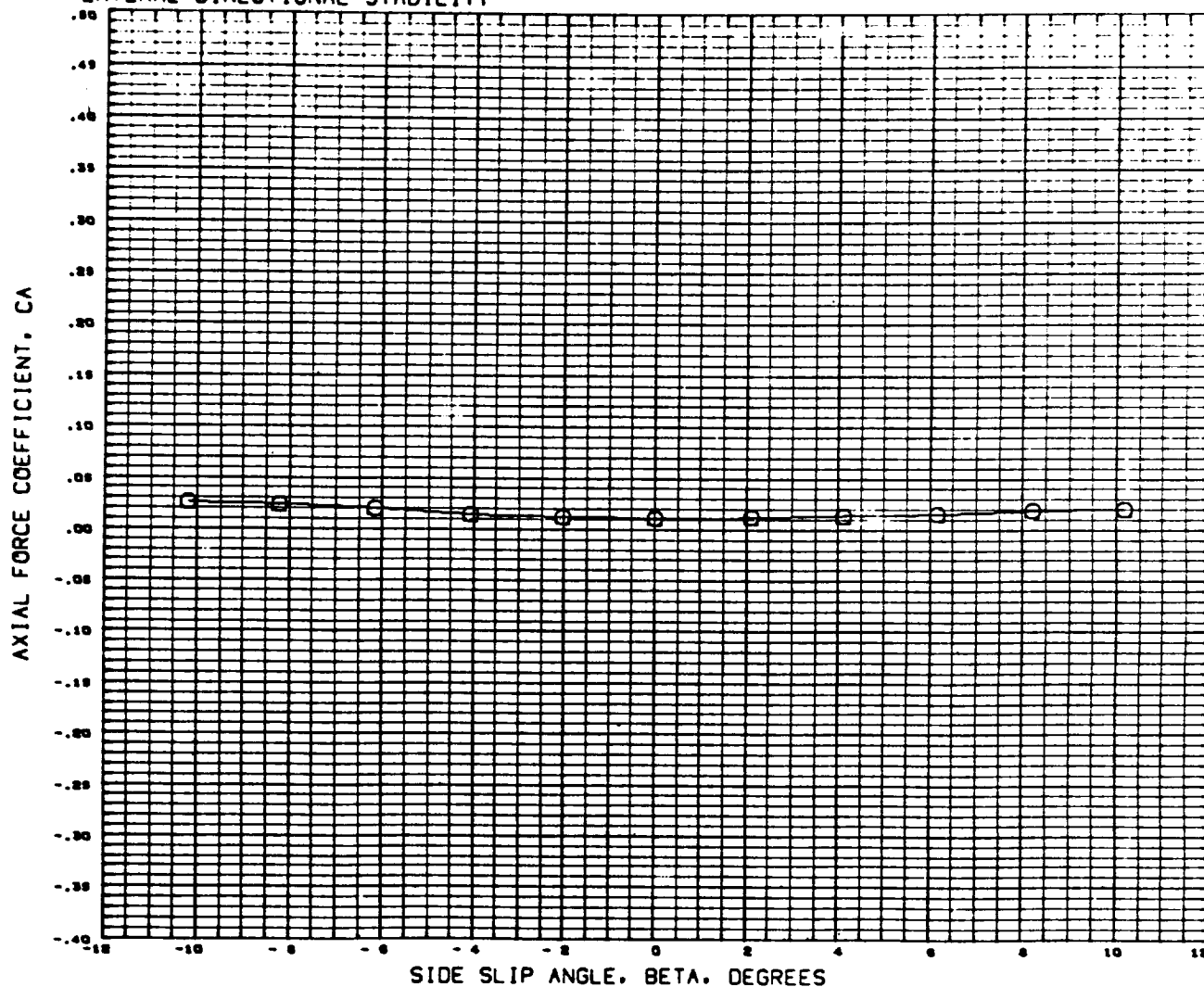
DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		0.602	ALPHA	10.000	DEL	0.000		SREF	4.9327	50. IN.
			DER	0.000	ELEVTR	0.000		LREF	1.6980	IN.
			ATLRON	0.000				BREF	3.7200	IN.
								KMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

LATERAL DIRECTIONAL STABILITY

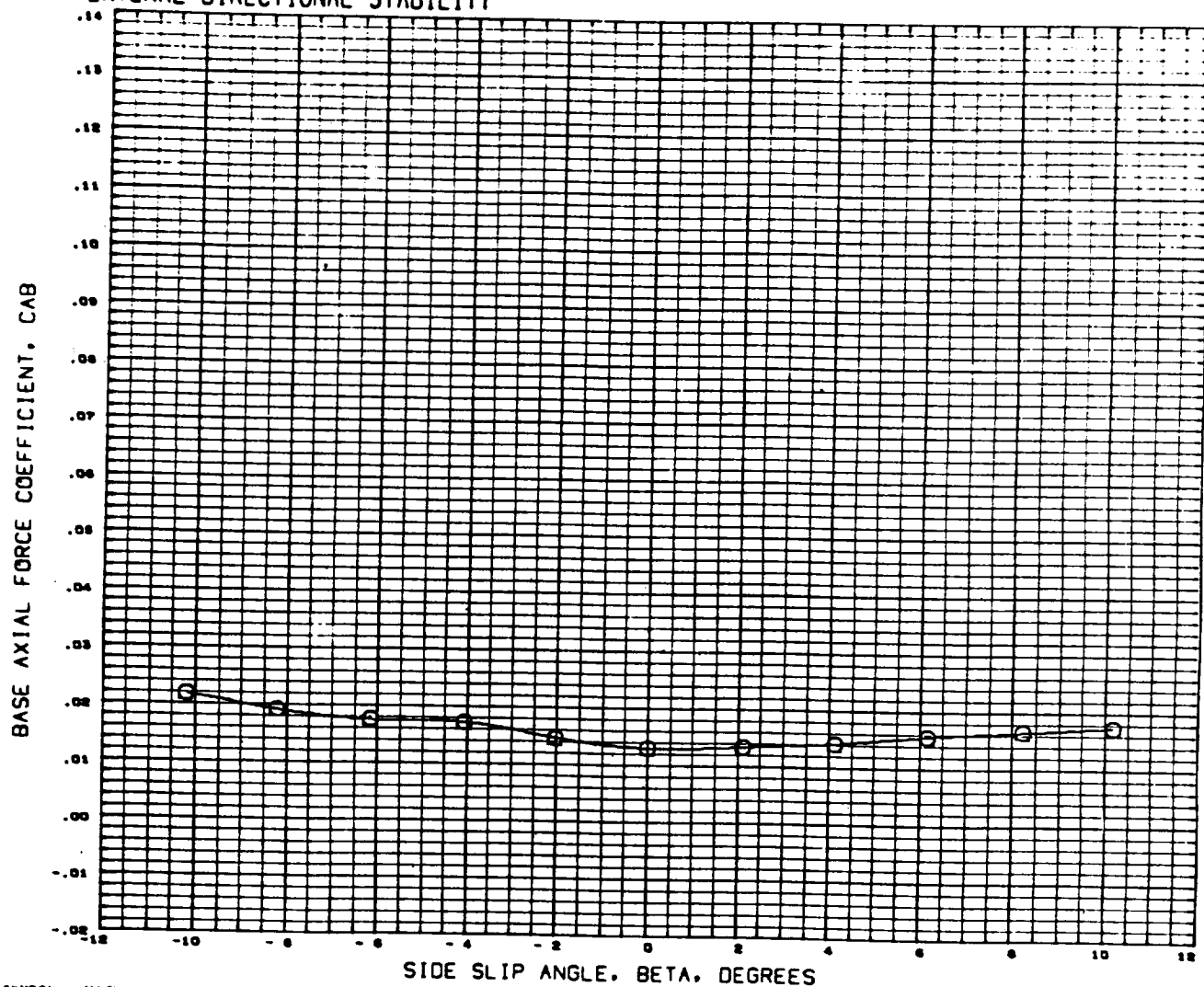


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.602	ALPHA	10.000	DEL	0.000	SREF	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.6980	IN.
		AILRON	0.000			SREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0023	

DATA HIST. CODE *E

M496-MSFC ARI198I-3 MODEL W482V2 (E38286) 06 SEP 72 PAGE 250

LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 0.602

ALPHA	10.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000		

REFERENCE INFORMATION

SREF	4.9327	SQ. IN.
LREF	1.8980	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W4B2V2

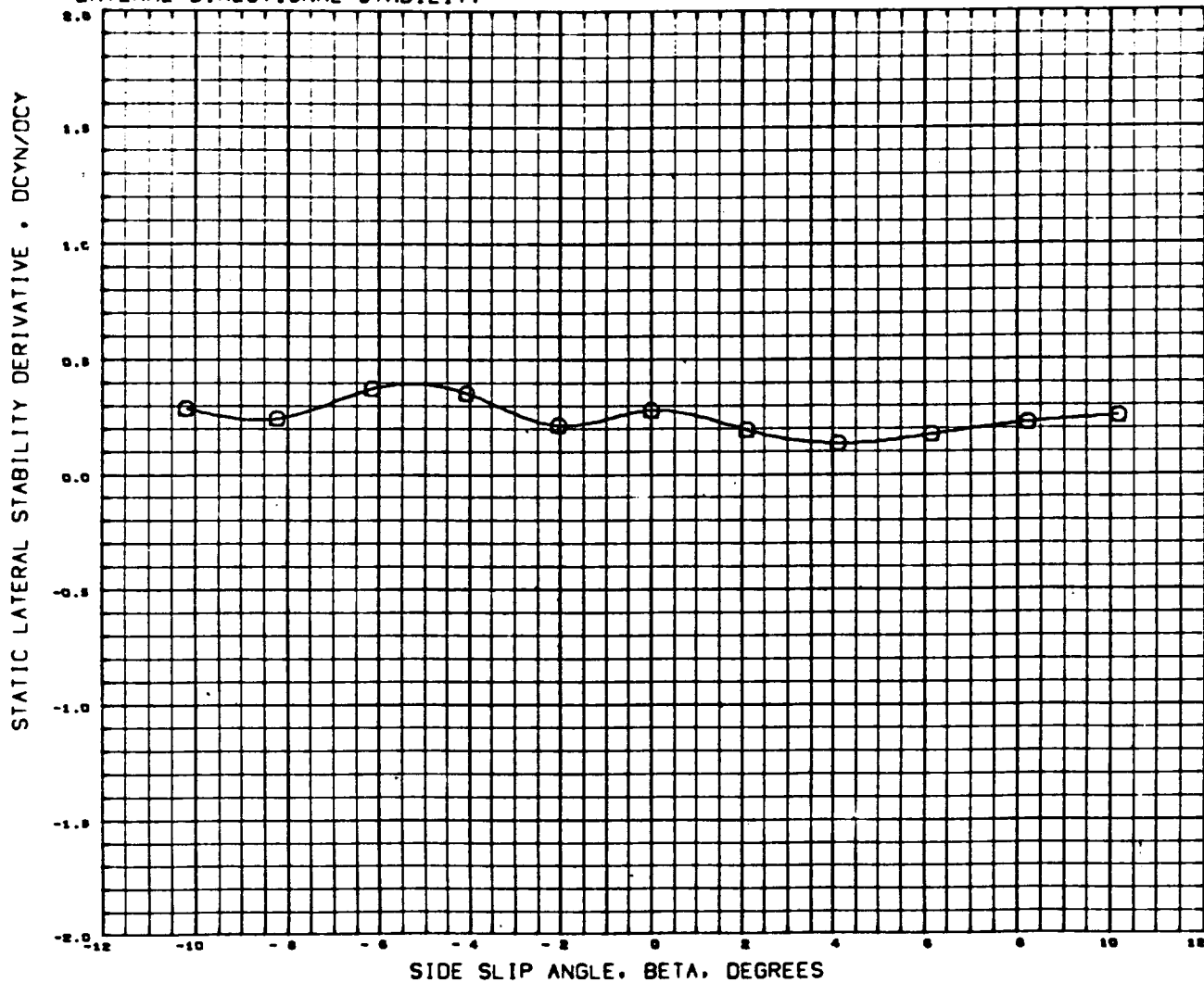
(E3828G)

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PAGE

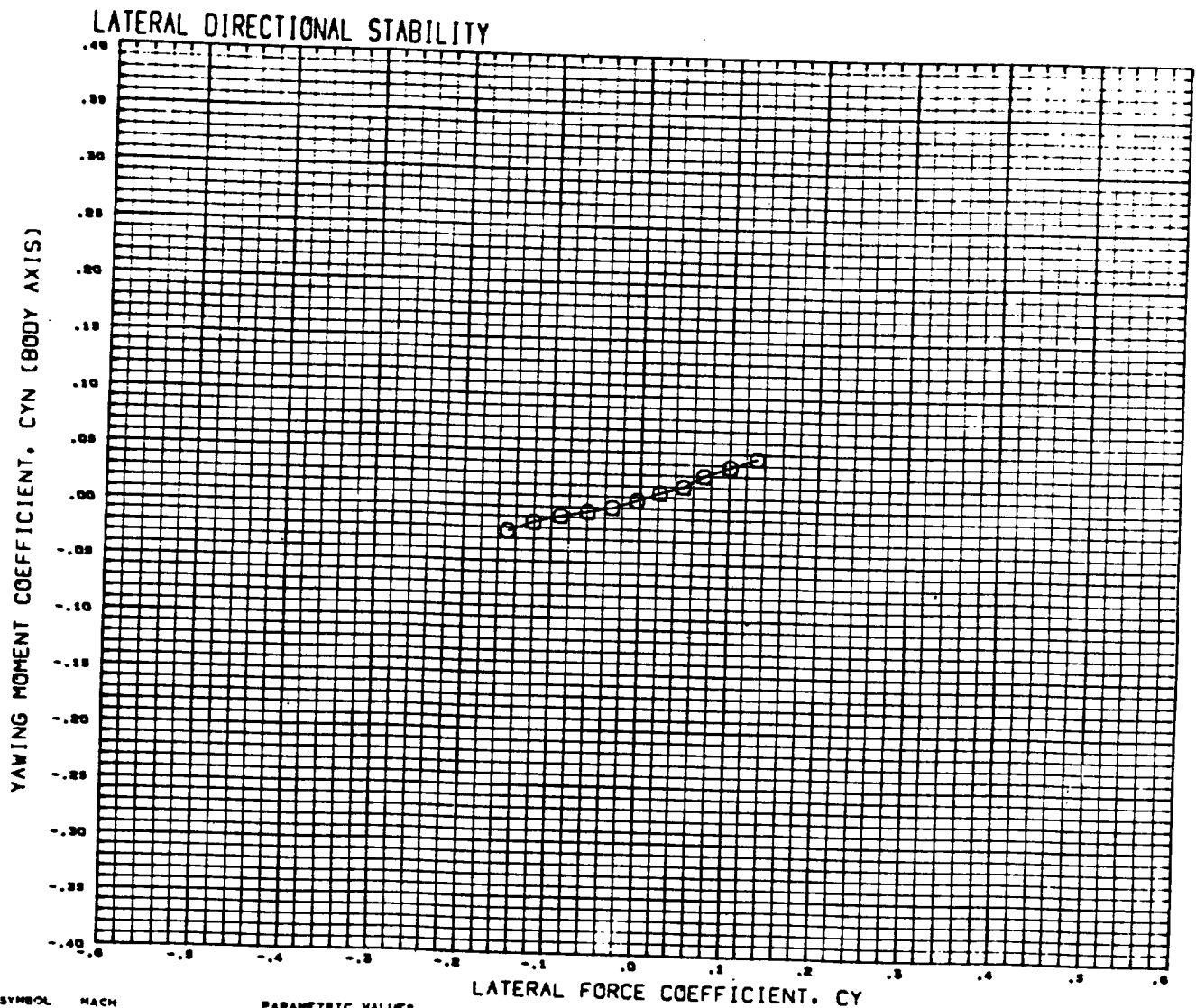
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LATERAL DIRECTIONAL STABILITY



SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	MACH	ALPHA	DEL	ELEVTR	BREF	LREF	SCALE
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		0.000			3.7200	2.4000	IN.
		0.000			0.0000	0.0000	IN.
					0.0000	0.0000	IN.
					0.0025		

DATA HIST. CODE *E



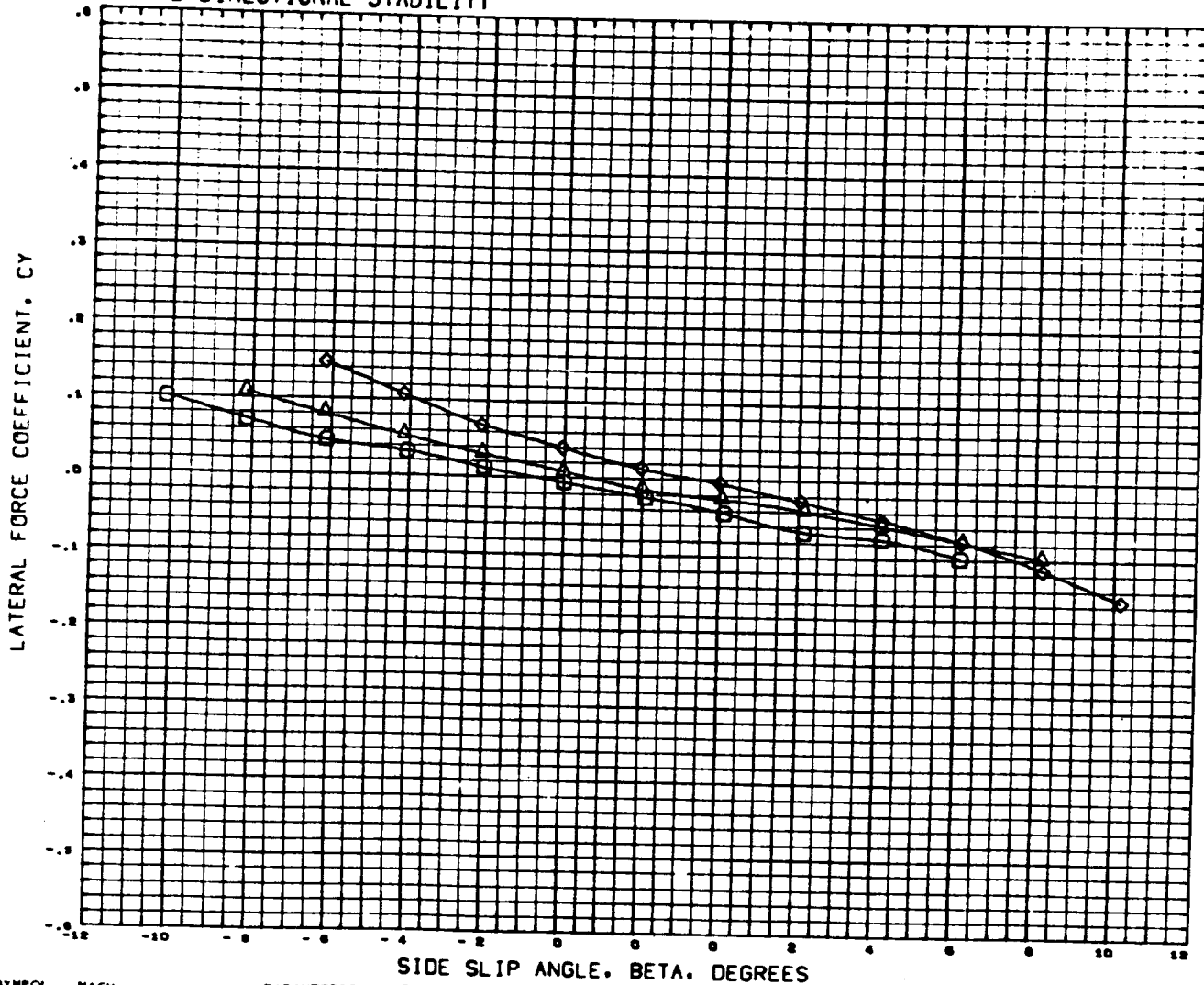
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.602	ALPHA	10.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREF	4.9327	SQ. IN.
LREF	1.8980	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

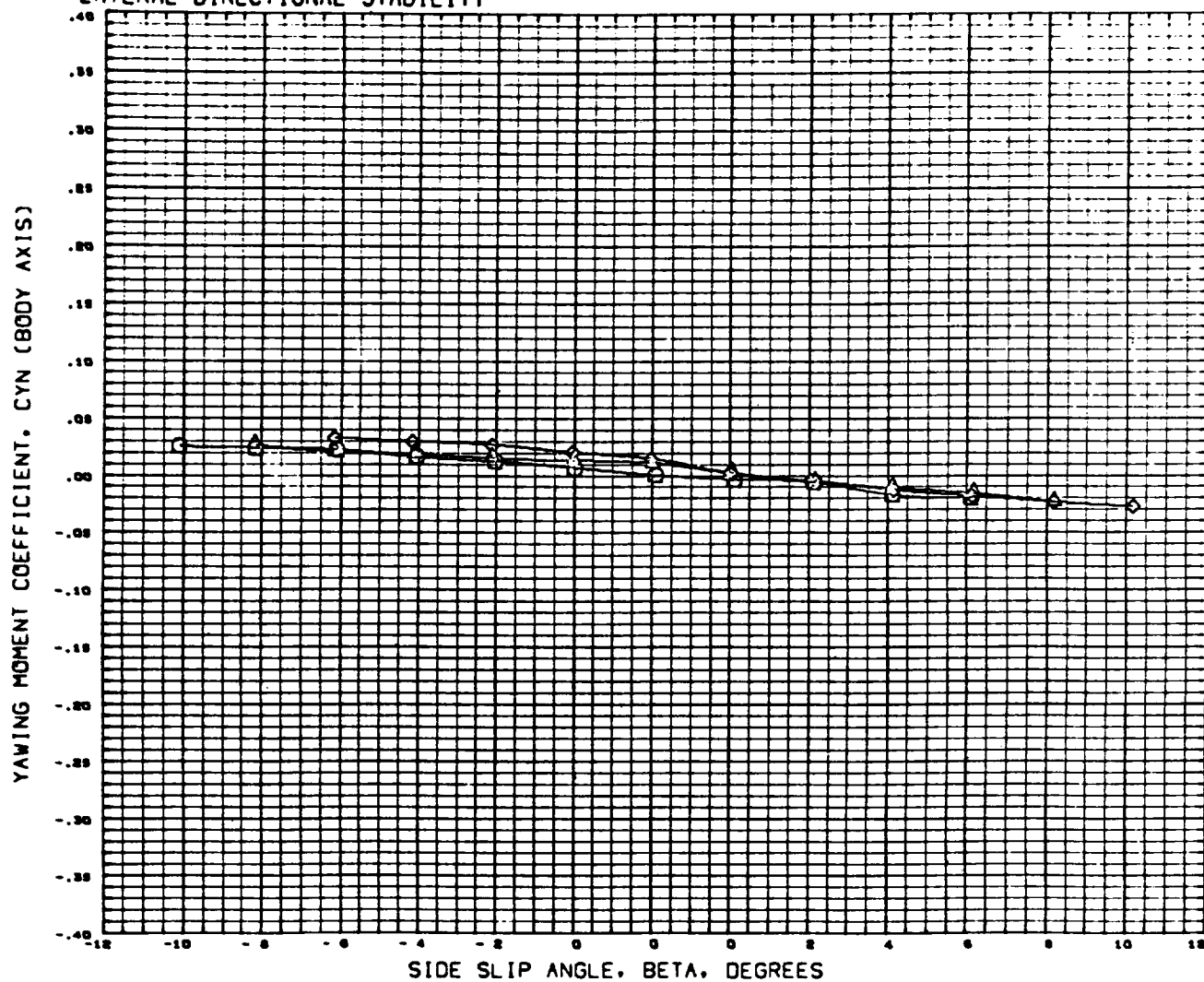


SYMBOL	MACH	PARAMETRIC VALUES
○	0.999	ALPHA 10.000 DEL 0.000
△	0.900	DER 0.000 ELEVTR 0.000
◇	1.199	ATLRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
BREF	4.9327	80. IN.
LREF	1.8980	IN.
QREF	3.7200	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY

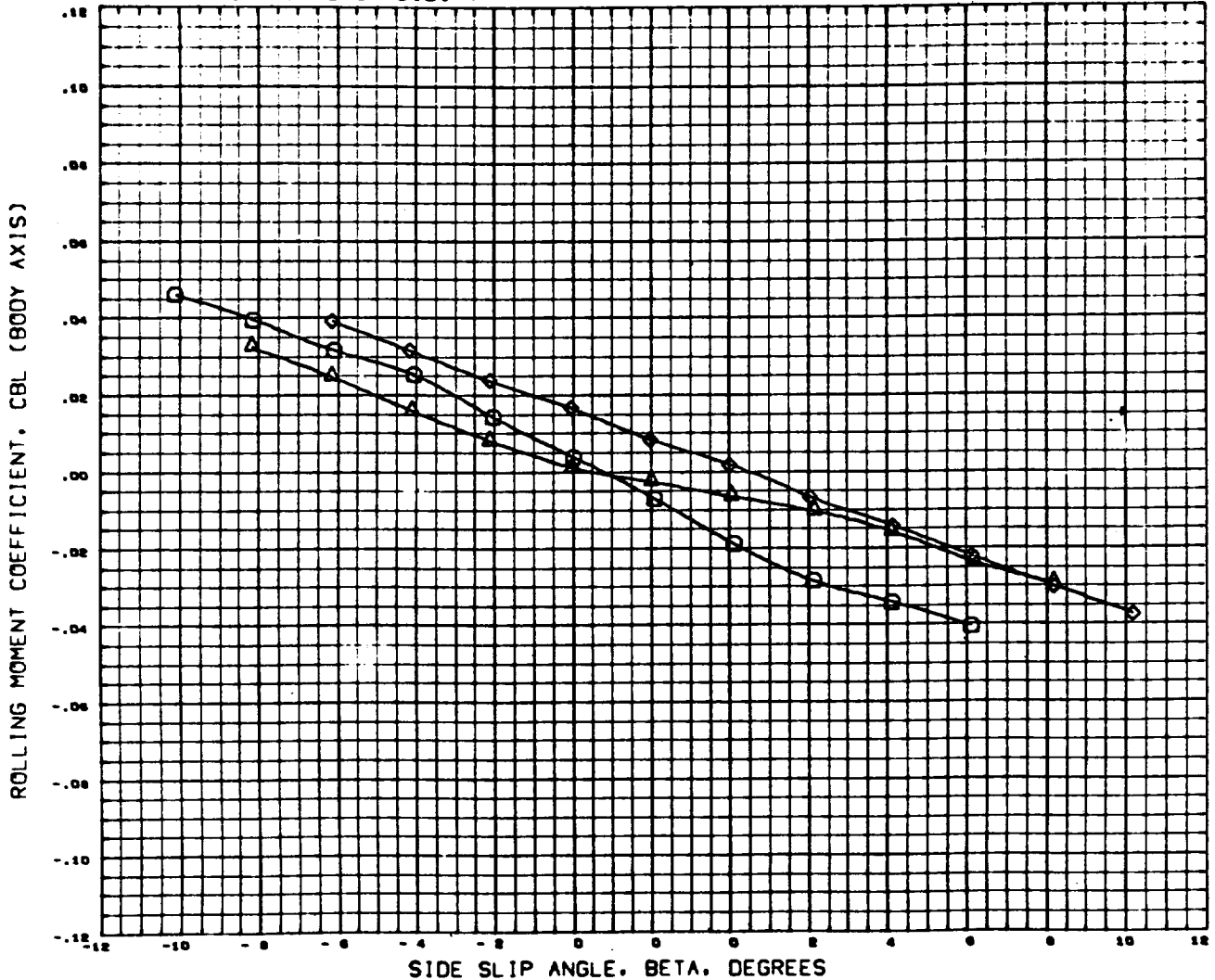


SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	0.599	ALPHA	10.000	DEL	0.000		SREF	4.9327	SQ. IN.
△	0.900	DER	0.000	ELEVTR	0.000		LREF	1.8980	IN.
◇	1.199	AILRON	0.000	CANARD	0.000		BREF	3.7200	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

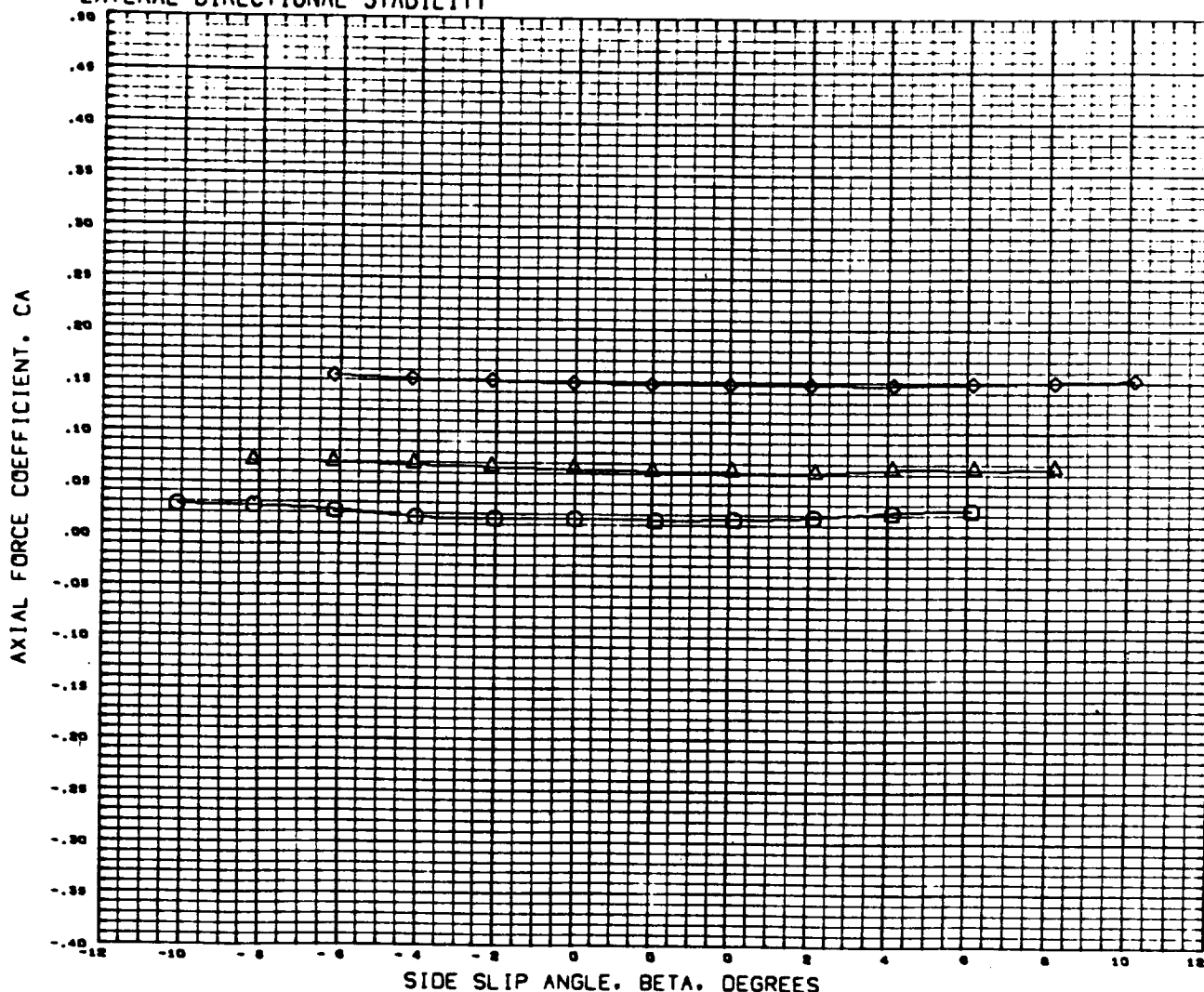
M496-MSFC AR1198I-3 MODEL W482C12V2 (E3829G) 06 SEP 72 PAGE 256

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	0.599	10.000	0.000	0.000	0.000	4.9327	1.8980	3.7200
△	0.900	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
◇	1.199	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000

LATERAL DIRECTIONAL STABILITY



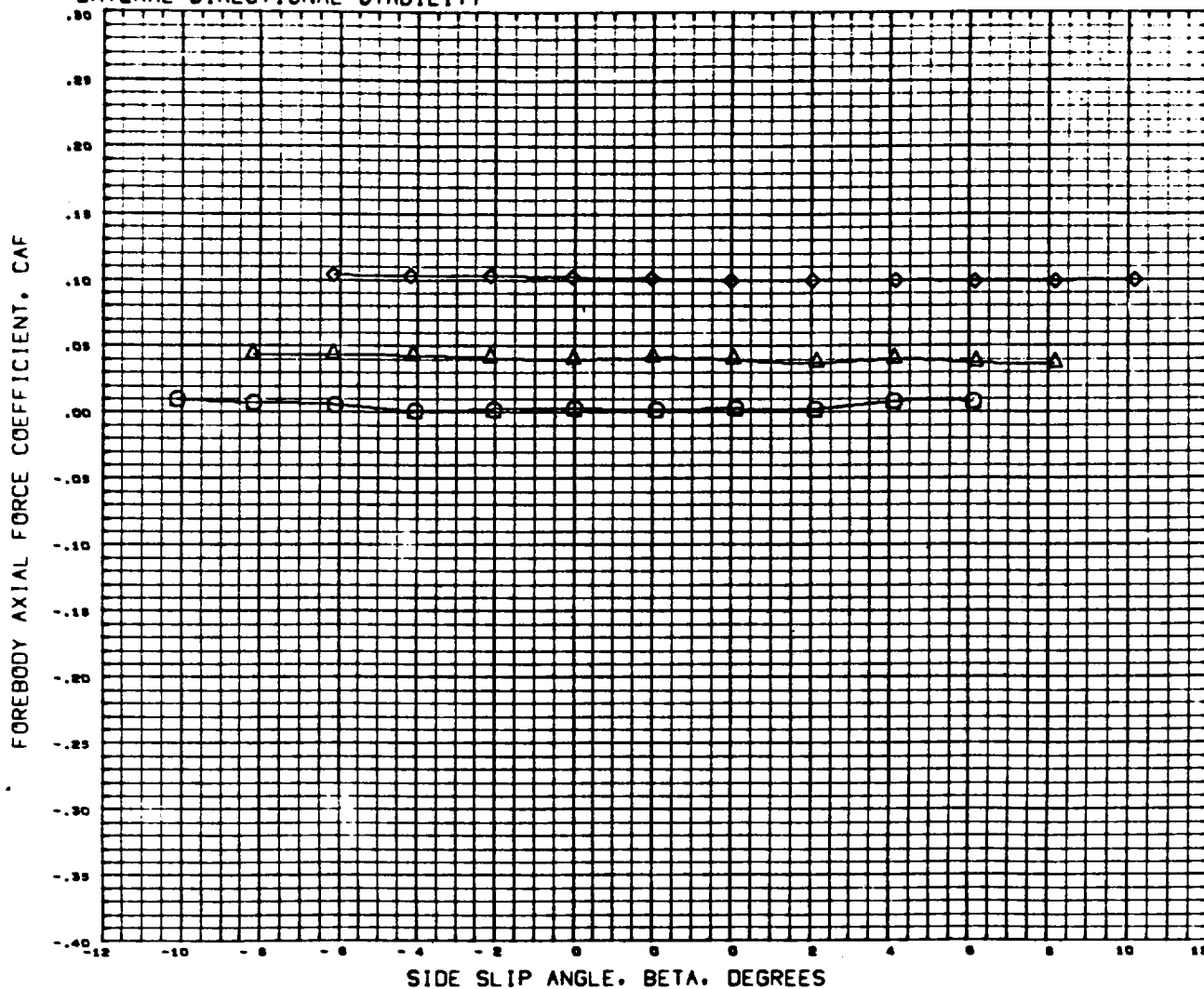
SYMBOL	MACH	PARAMETRIC VALUES			
○	0.599	ALPHA	10.000	DEL	0.000
△	0.900	DER	0.000	ELEVTR	0.000
◇	1.199	AILROM	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREF	4.9327	SQ. IN.
LREF	1.6960	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

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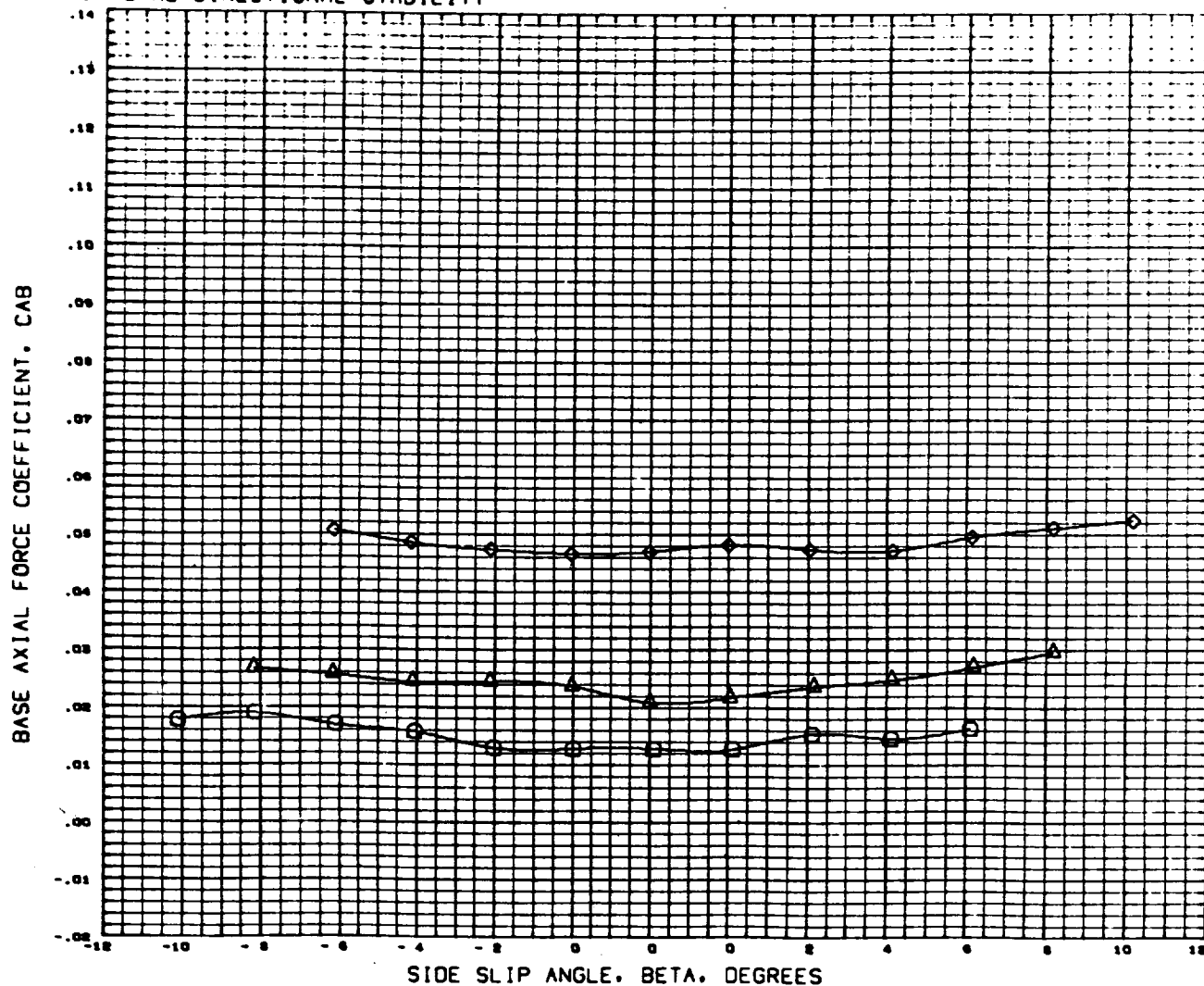
LATERAL DIRECTIONAL STABILITY



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	MACH	0.999	ALPHA	10.000	DEL	0.000	SRFP	4.9327
△		0.900	DER	0.000	ELEVTR	0.000	LRFP	1.9980
◇		1.199	ATLRON	0.000	CANARD	0.000	BRFP	3.7200
							KNRP	2.4000
							THRP	0.0000
							ZHRP	0.0000
							SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

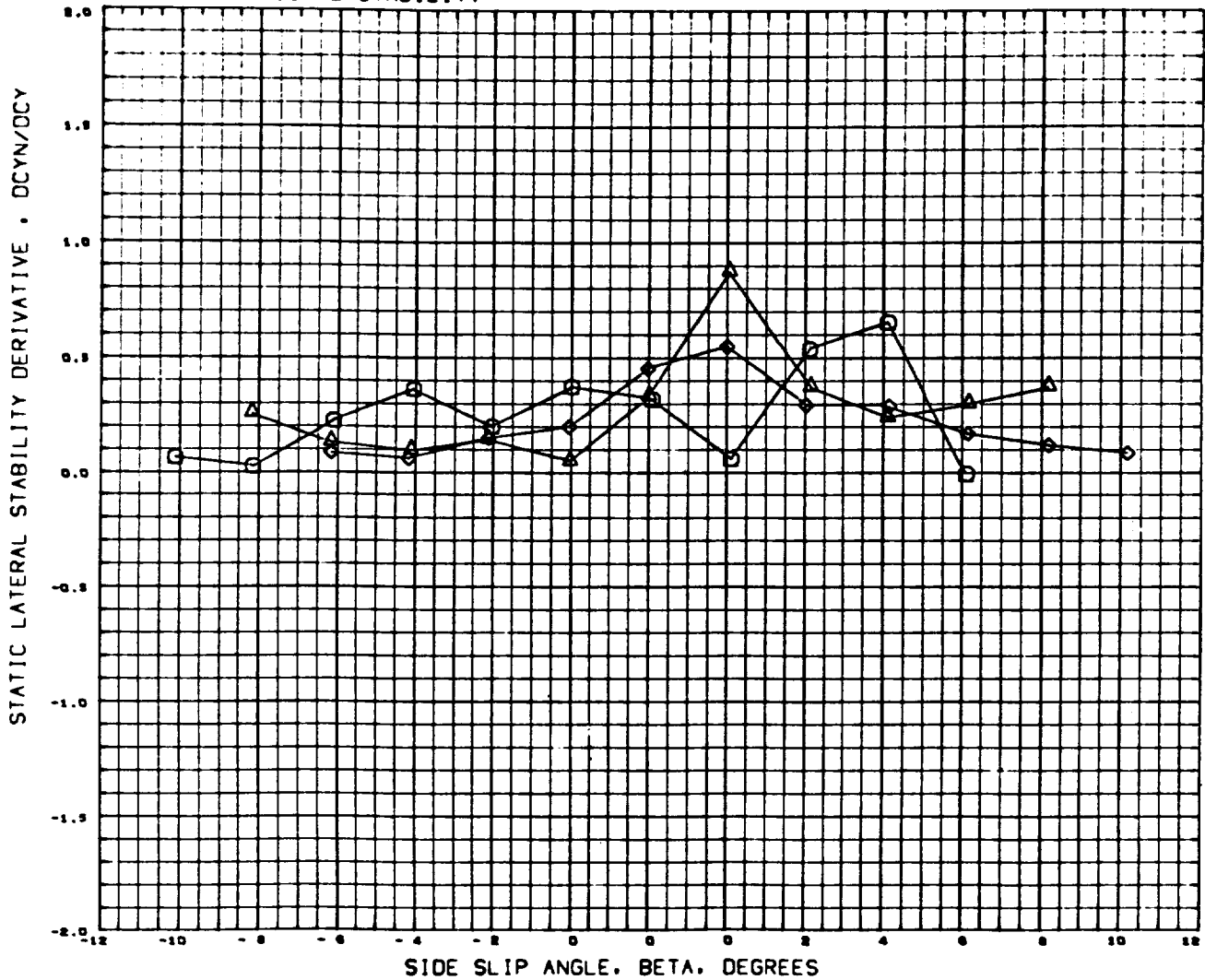


SYMBOL	MACH	PARAMETRIC VALUES
○	0.599	ALPHA 10.000 DEL 0.000
△	0.900	DER 0.000 ELEVTR 0.000
◇	1.199	ATLRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
SREP	4.9327	30. IN.
LREP	1.8960	IN.
BREP	3.7200	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

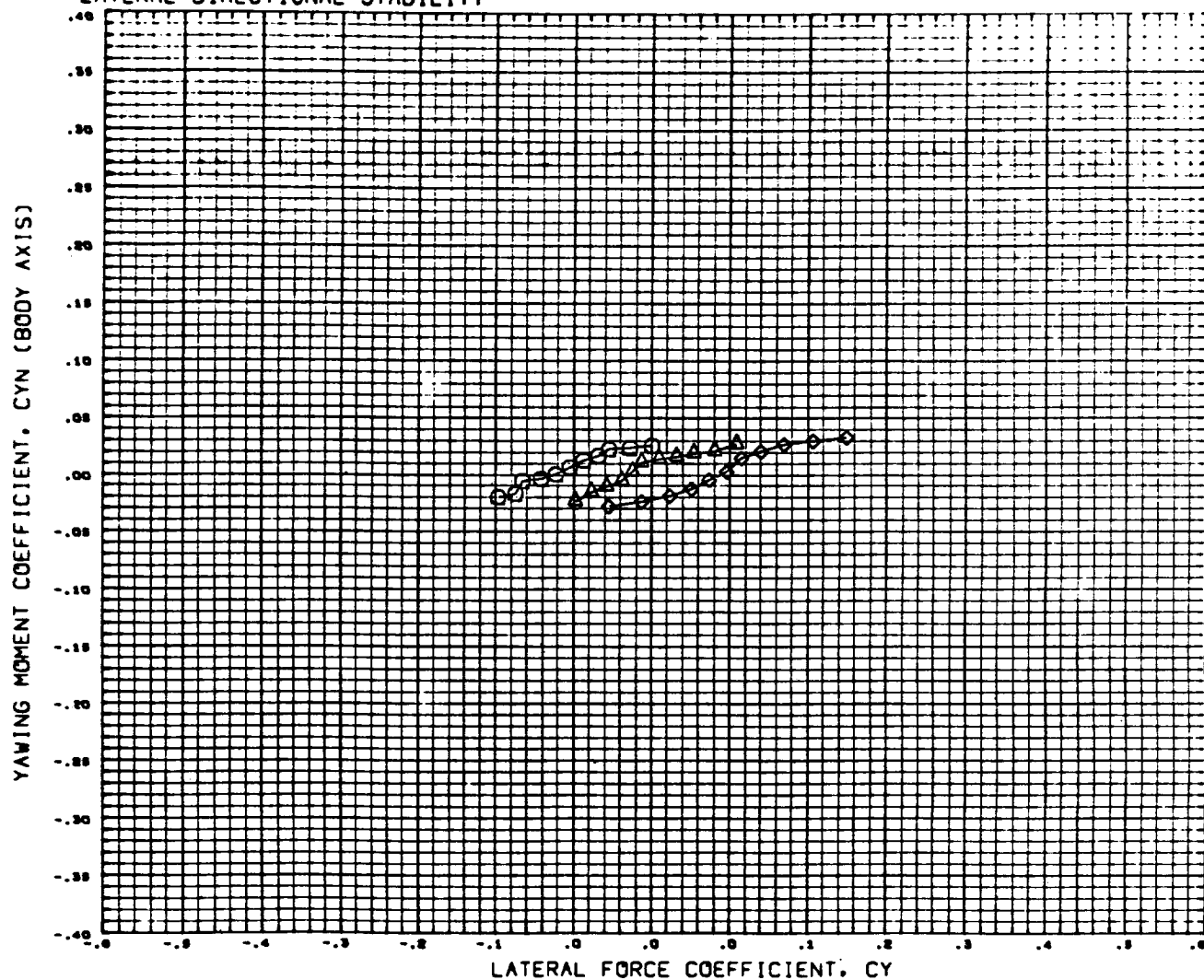


SYMBOL	MACH	PARAMETRIC VALUES
○	0.599	ALPHA 10.000 DEL 0.000
△	0.900	DER 0.000 ELEVTR 0.000
◇	1.199	ATLRON 0.000 CANARD 0.000

REFERENCE INFORMATION		
SRFP	4.9327	89 IN.
LRFP	1.6900	IN.
DRFP	3.7200	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

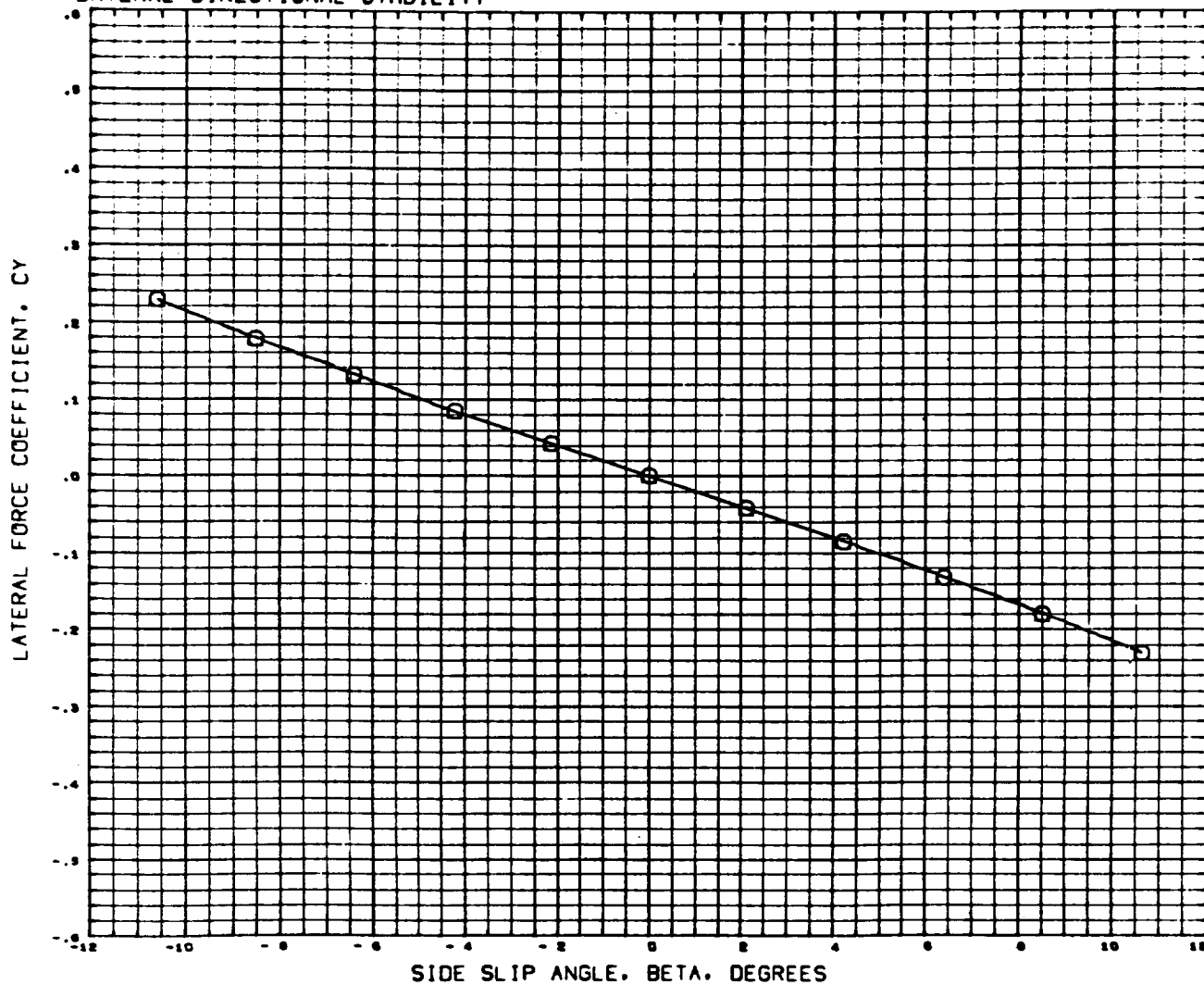


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.999	ALPHA	10.000	DEL	0.000	SREP	4.9327 SQ. IN.
△	0.900	DER	0.000	ELEVTR	0.000	LREF	1.6960 IN.
◇	1.199	AILRON	0.000	CANARD	0.000	BREF	3.7200 IN.
						XHRP	2.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

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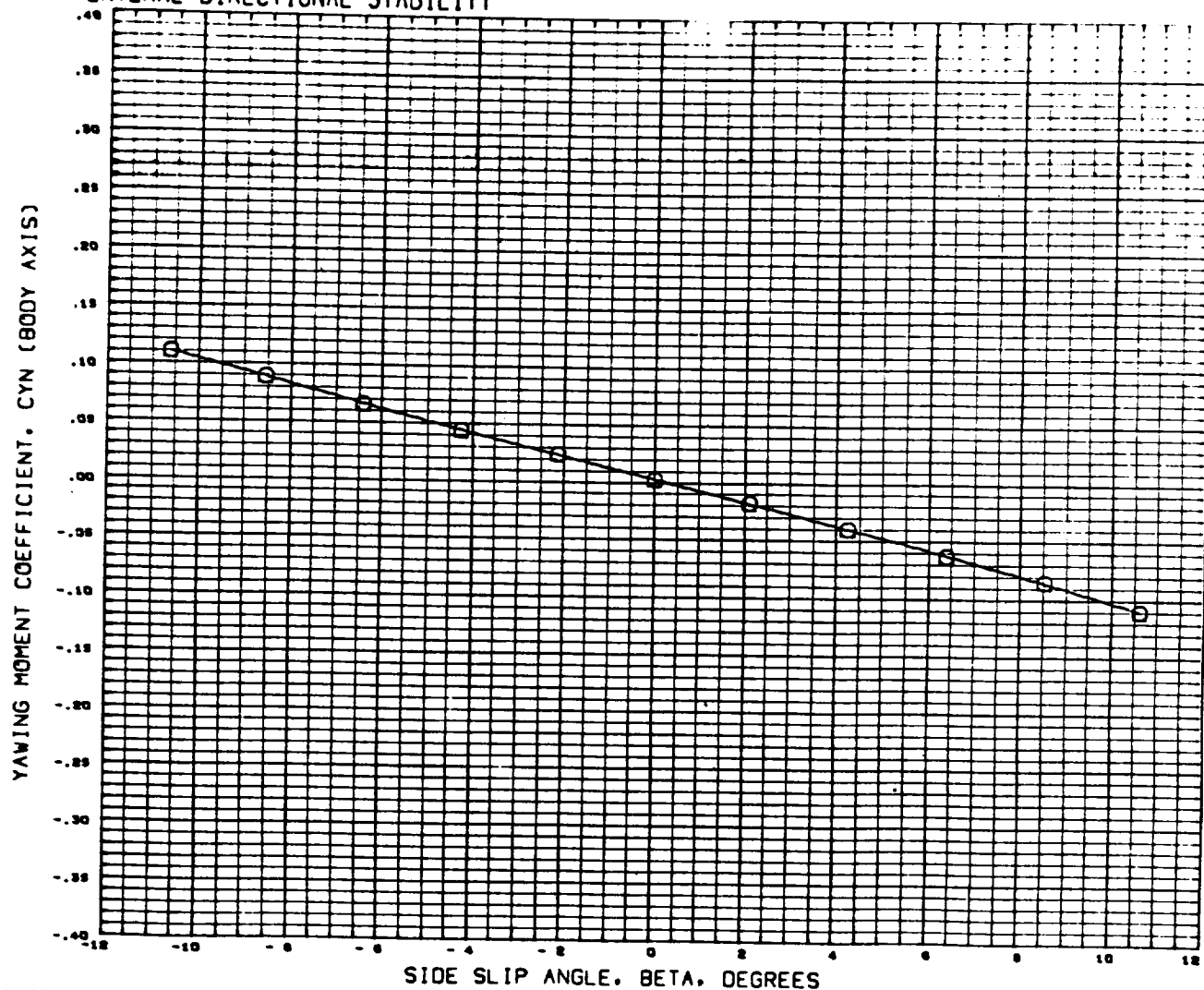
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	SCALE	BREF	LREF	ZREF
○	1.939	15.000	0.000	0.000	0.000	4.0225	1.5360	0.0000
		DER				4.3000	2.4000	0.0000
		AILRON				0.0000	0.0000	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL MACH
○ 1.939

PARAMETRIC VALUES
ALPHA 15.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATLROW 0.000

REFERENCE INFORMATION
SREF 4.8225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0029

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W682

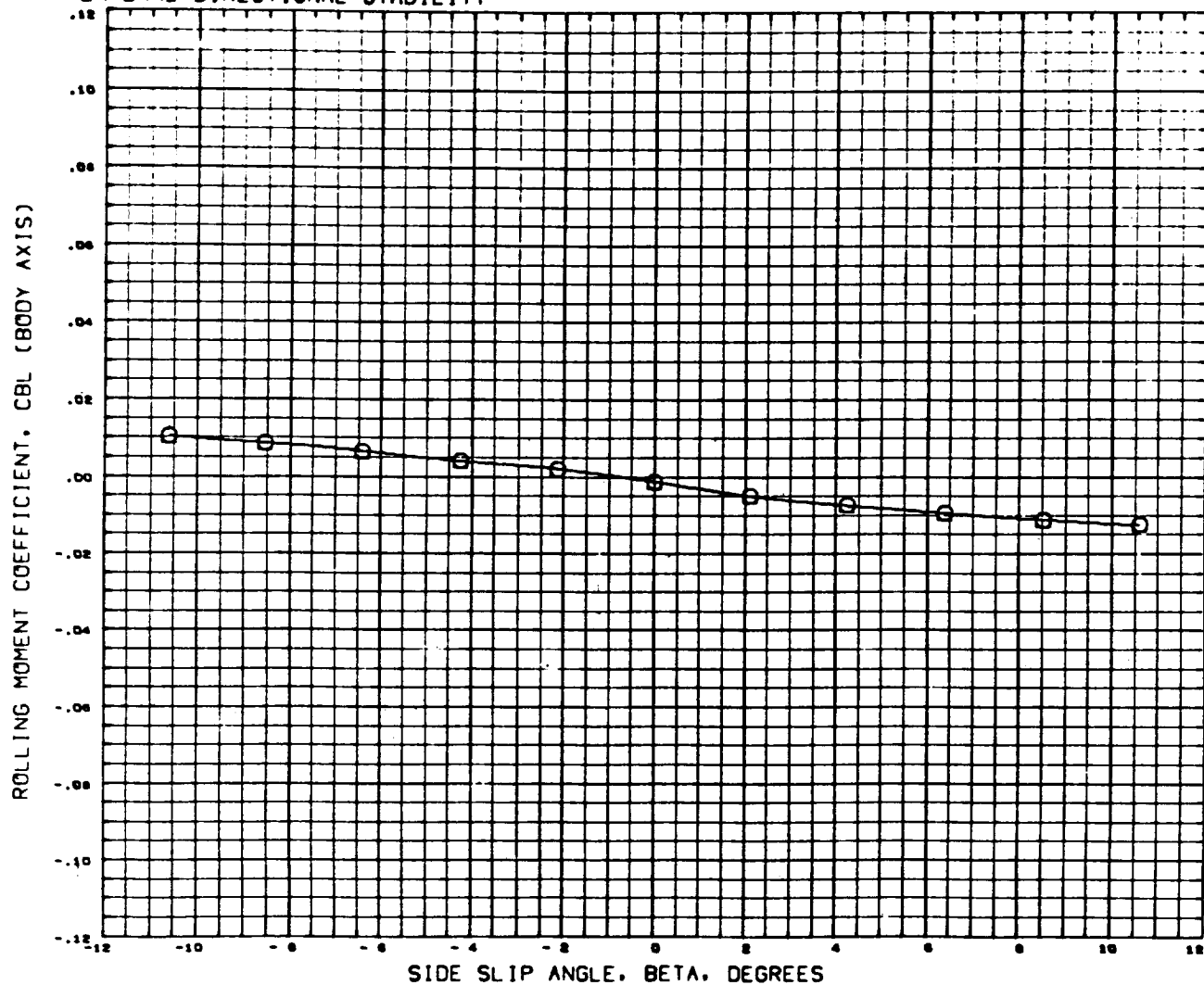
(E3806H)

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264

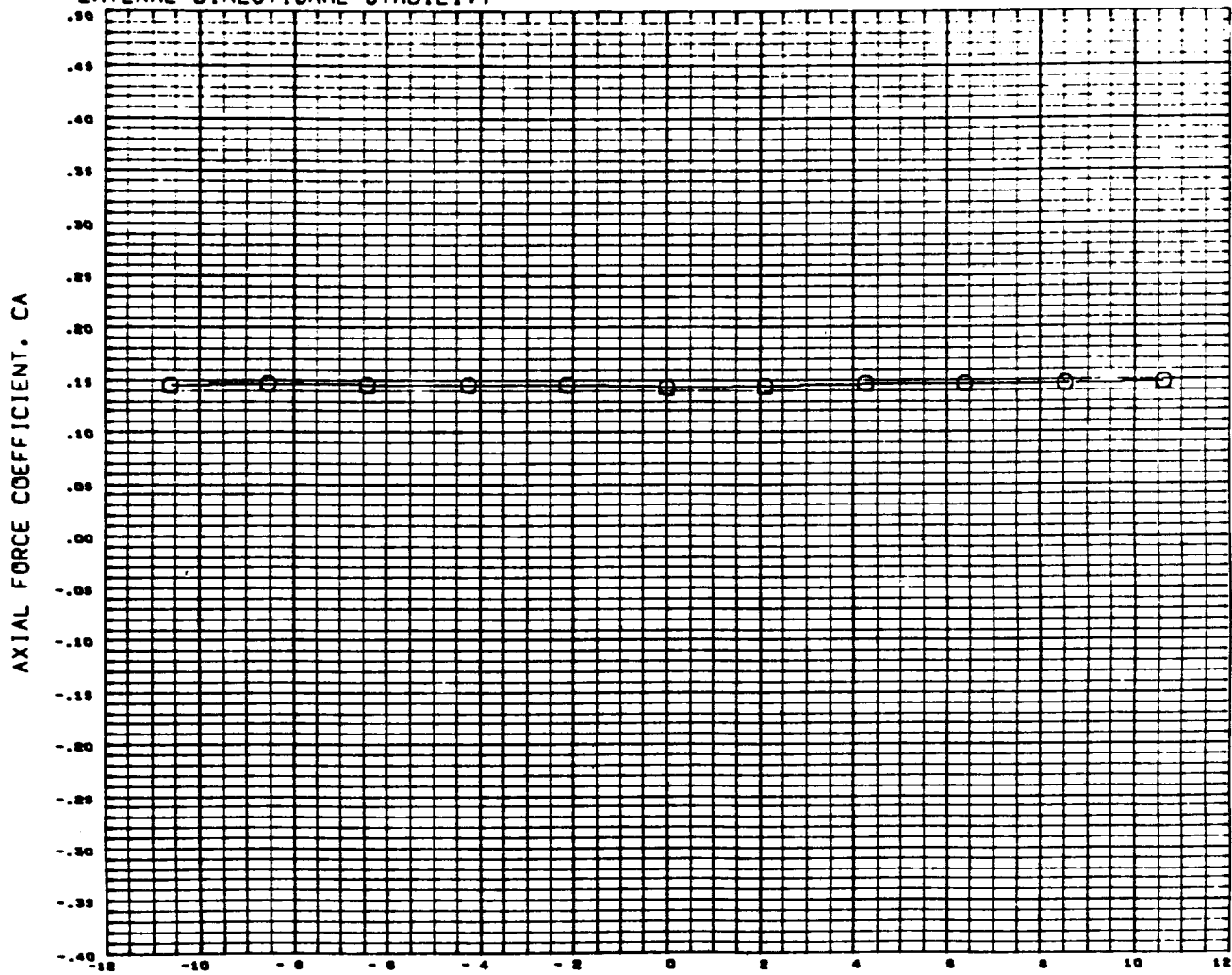
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	AILRON	SRP	LRP	IN.
○	1.959	15.000	0.000	0.000	0.000	4.6225	1.5340	IN.
						SRP	4.3000	IN.
						YMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE 9E

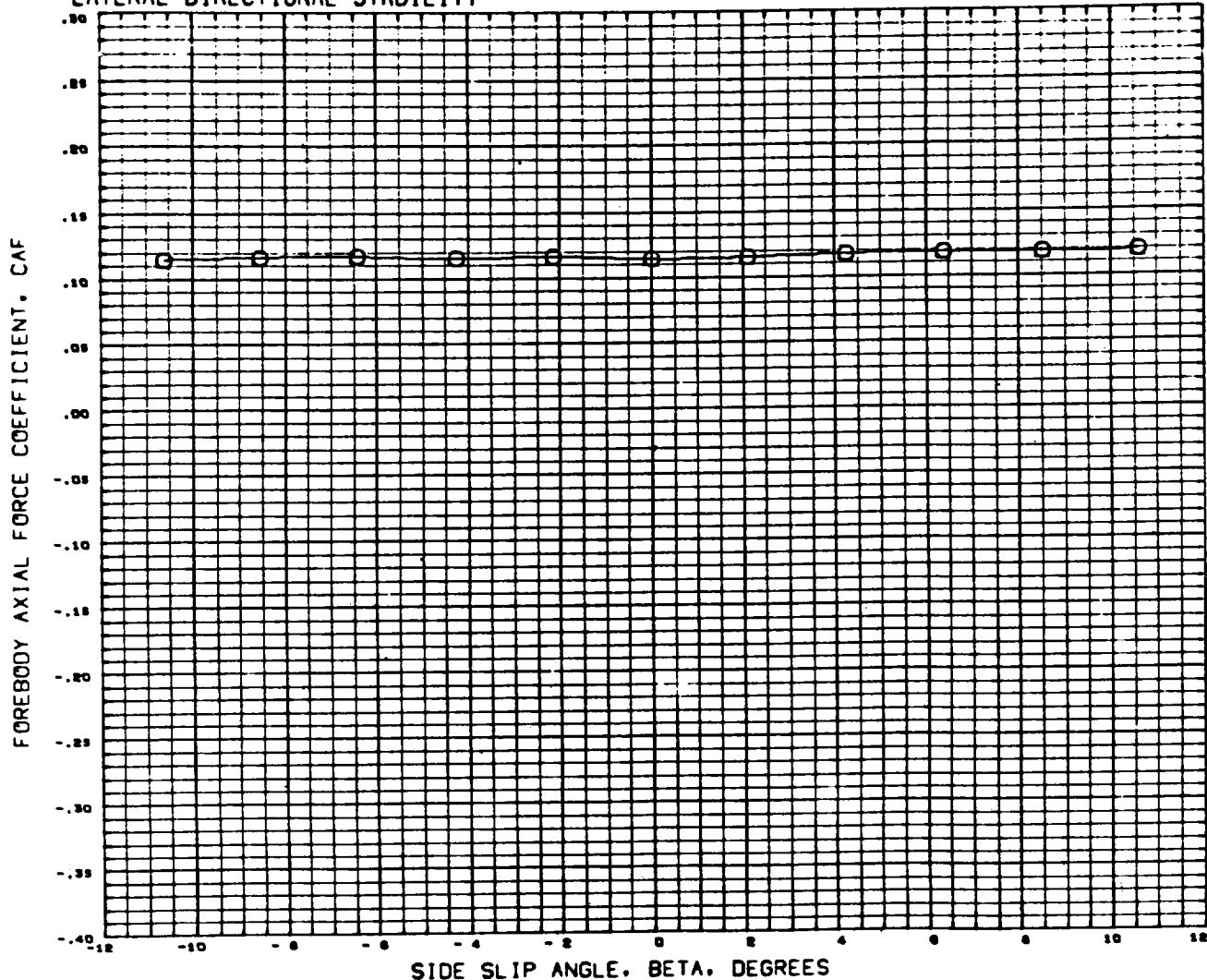
LATERAL DIRECTIONAL STABILITY



SYMBOL	NACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.939	ALPHA	19.000	DEL	0.000	SREF	4.8229	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		AILRON	0.000			BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0029	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.959	ALPHA	15.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5560 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

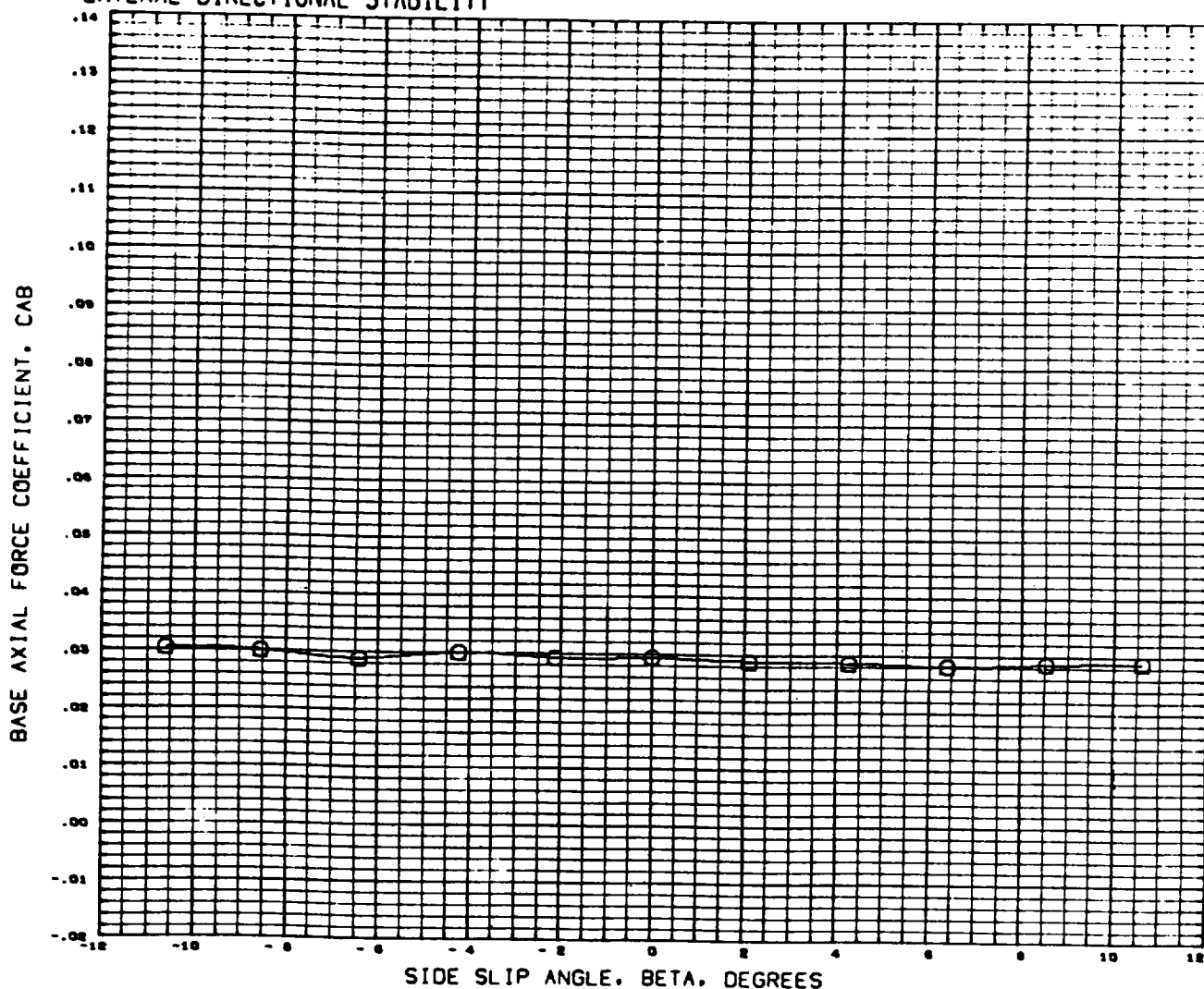
MODEL

W6B2

(E3806H) 06 SEP 72

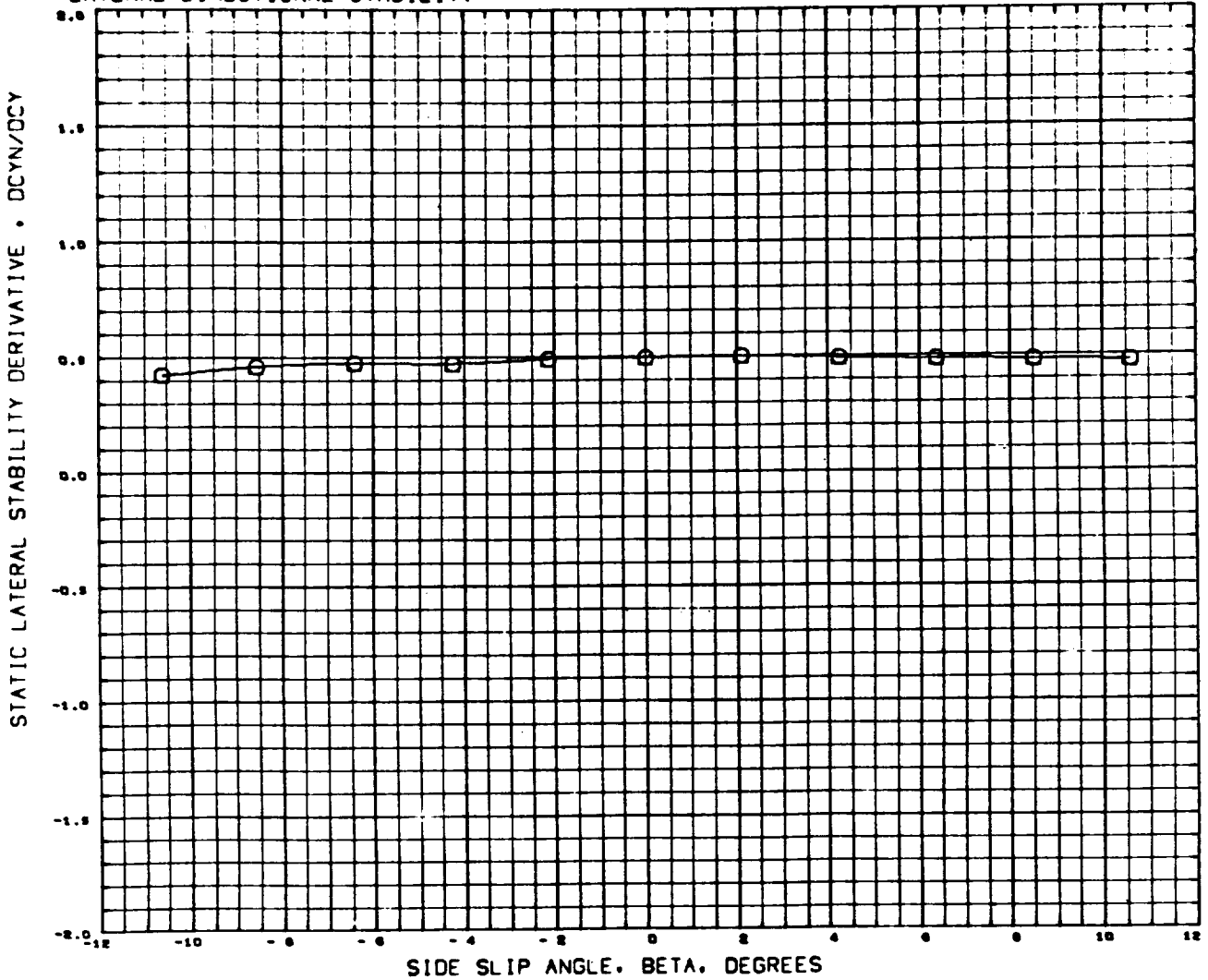
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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.959	ALPHA	13.000	DEL	0.000	SREP	4.6225	30.1N.
		DER	0.000	ELEVTR	0.000	LREP	1.3360	1N.
		ATLRON	0.000			BREP	4.3000	1N.
						XMRP	2.4000	1N.
						YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
						SCALE	0.0025	

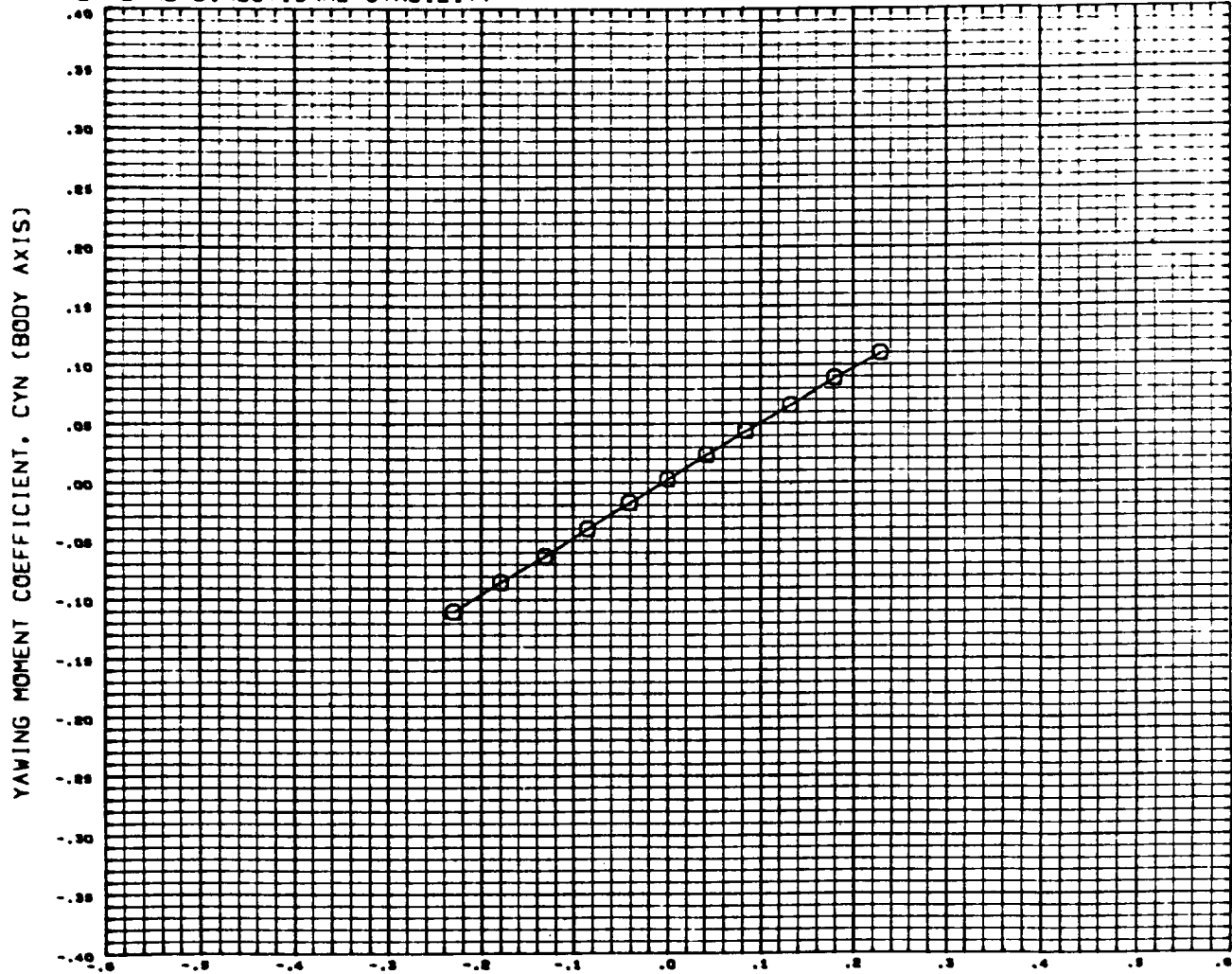
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR		SREF	LREF	BREF
○	1.959	15.000	0.000	0.000		4.0225	1.5360	4.3000
		0.000						2.4000
		0.000						0.0000
								0.0000
								0.0025

DATA HIST. CODE *E

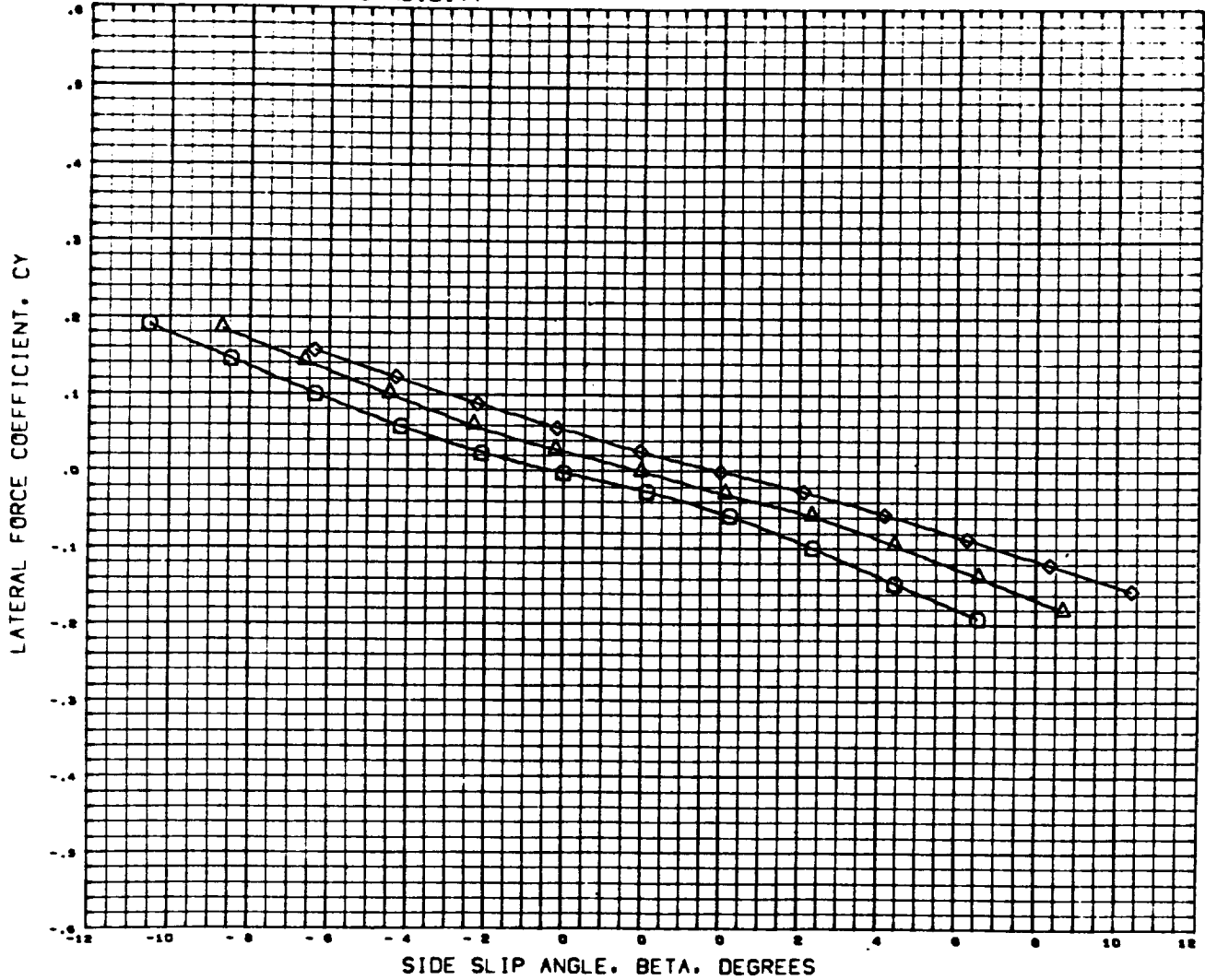
LATERAL DIRECTIONAL STABILITY



SYMBOL	HATCH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.959	ALPHA	15.000	DEL	0.000	SREP	4.6225	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		AILRON	0.000			BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

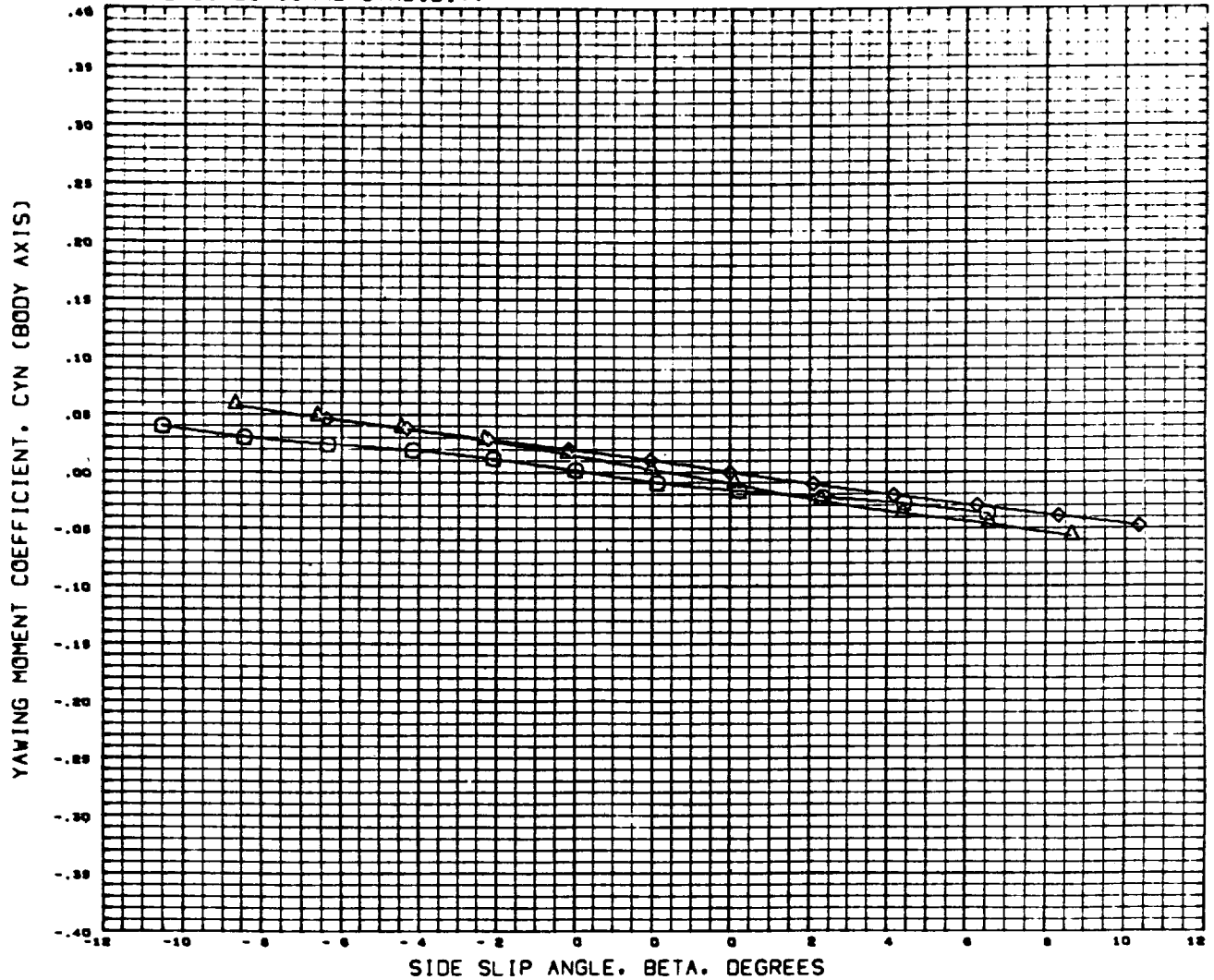


SYMBOL	MACH	PARAMETRIC VALUES
○	1.201	ALPHA 15.000 DEL 0.000
△	1.954	DER 0.000 ELEVTR 0.000
◇	3.489	AILRON 0.000

REFERENCE INFORMATION		
SRFP	7.9005	80. IN.
LRFP	3.1700	IN.
BRFP	4.3920	IN.
KMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 9E

LATERAL DIRECTIONAL STABILITY



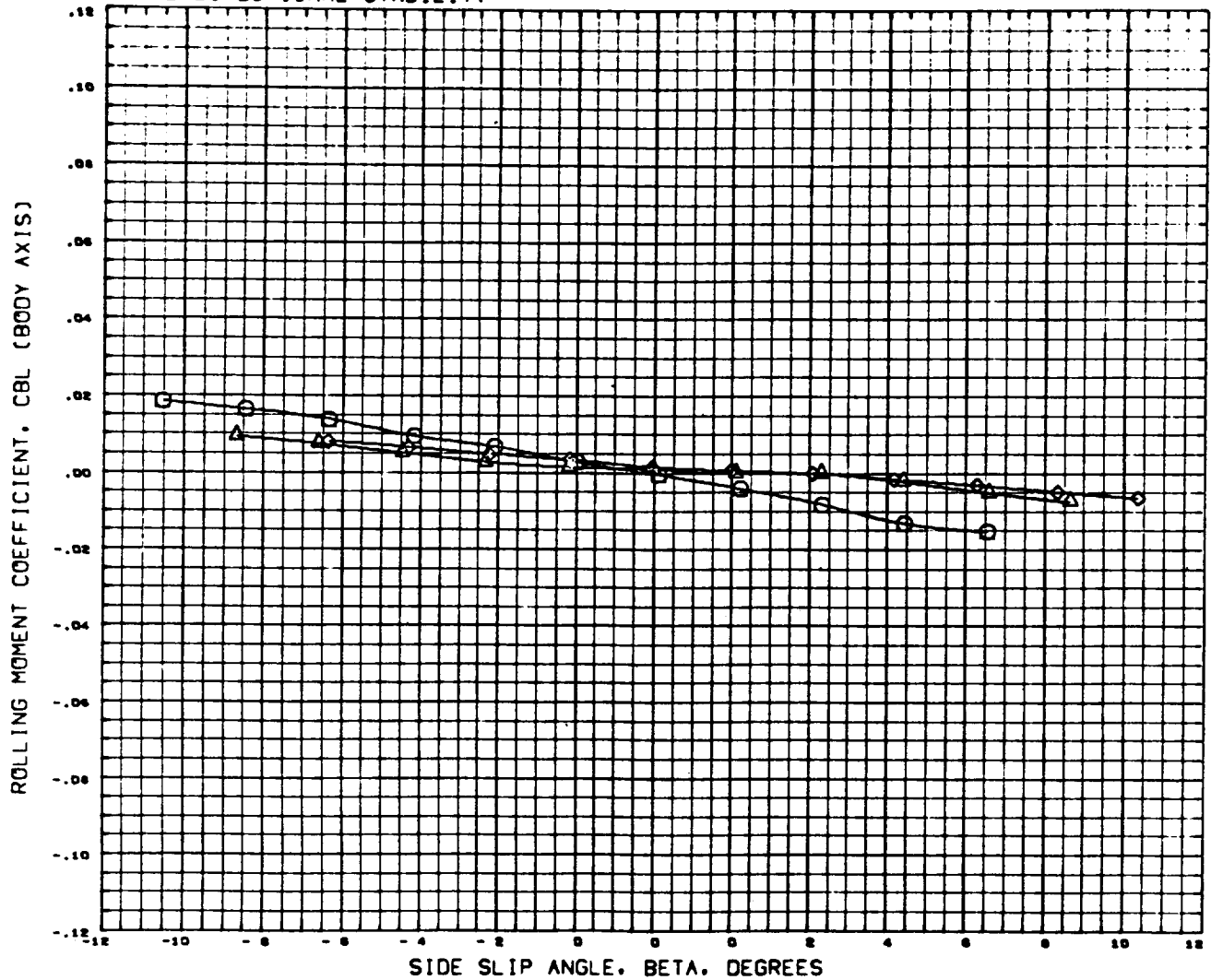
SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	0.000
○	1.201	DER	0.000	ELEVTR	0.000
◇	3.480	ATLRON	0.000		

REFERENCE INFORMATION		
SREP	7.7005	SQ. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 4E

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LATERAL DIRECTIONAL STABILITY

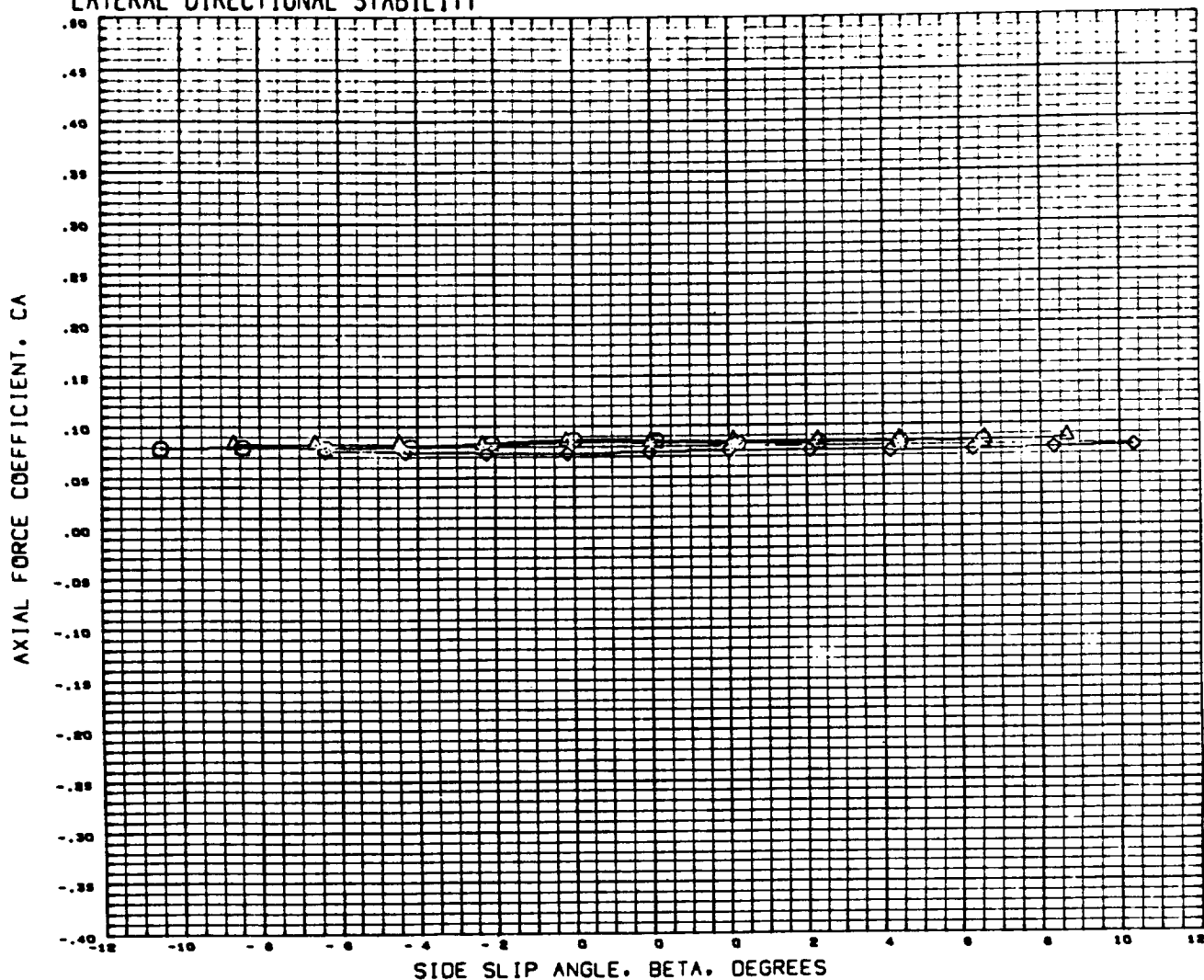


SYMBOL	MACH	PARAMETRIC VALUES
○	1.201	ALPHA 15.000 DEL 0.000
△	1.994	DER 0.000 ELEVTR 0.000
◇	3.480	ATTIRON 0.000

REFERENCE INFORMATION		
SRF	7.7005	80 IN.
LRP	3.1700	IN.
SRF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

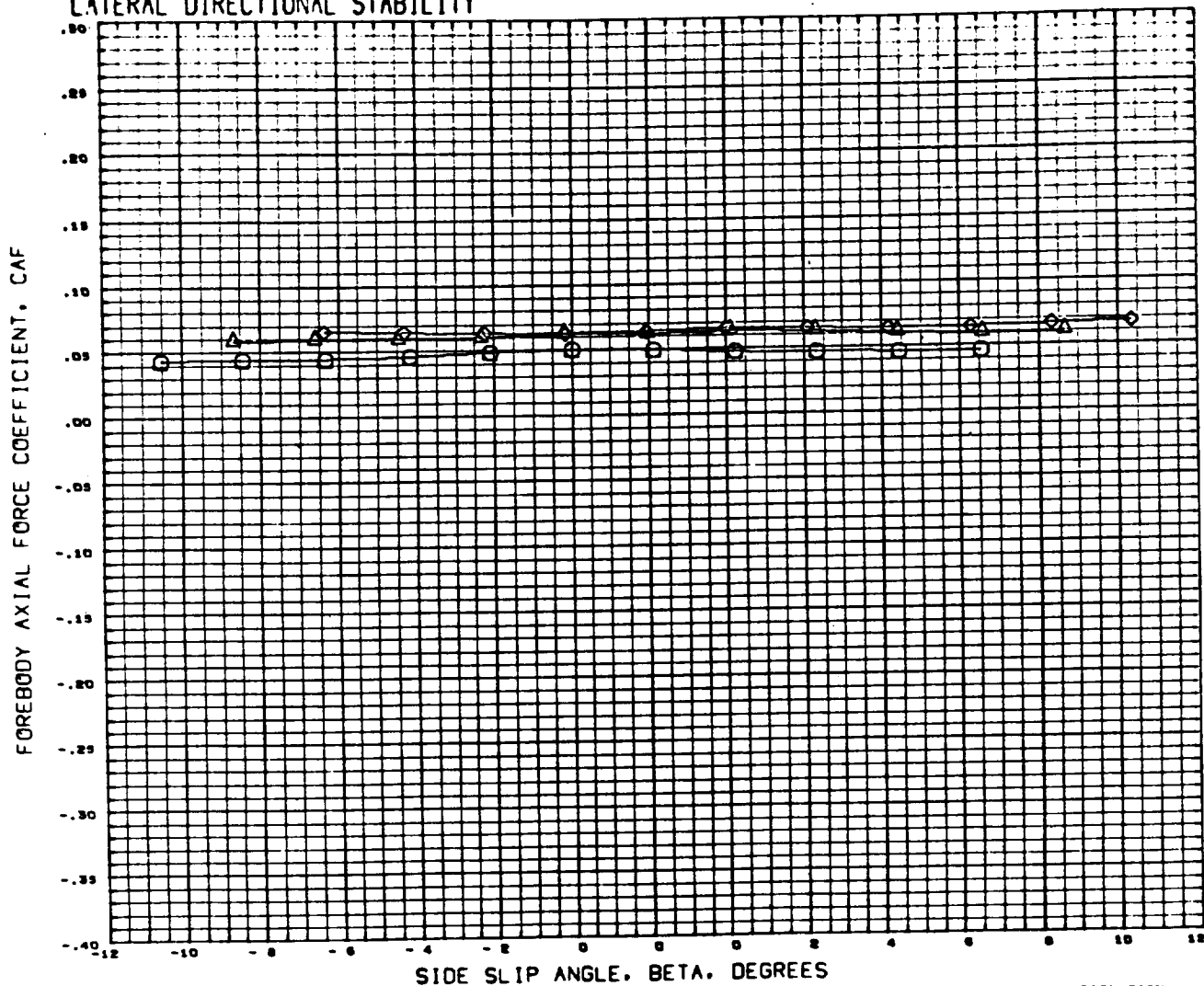


SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	MACH	ALPHA	DEL	ELEVTR	SREF	LREF	BREF
○	1.201	15.000	0.000	0.000	7.7005	3.1700	4.3920
△	1.994	0.000	0.000	0.000	2.4000	0.0000	0.0000
◇	3.480	0.000	0.000	0.000	0.0000	0.0000	0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.201	ALPHA	15.000	DEL	0.000
△	1.954	DER	0.000	ELEVTR	0.000
◇	3.460	ATLRON	0.000		

REFERENCE INFORMATION		
SRFP	7.7005	88. IN.
LRFP	3.1700	IN.
BRFP	4.3920	IN.
YHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

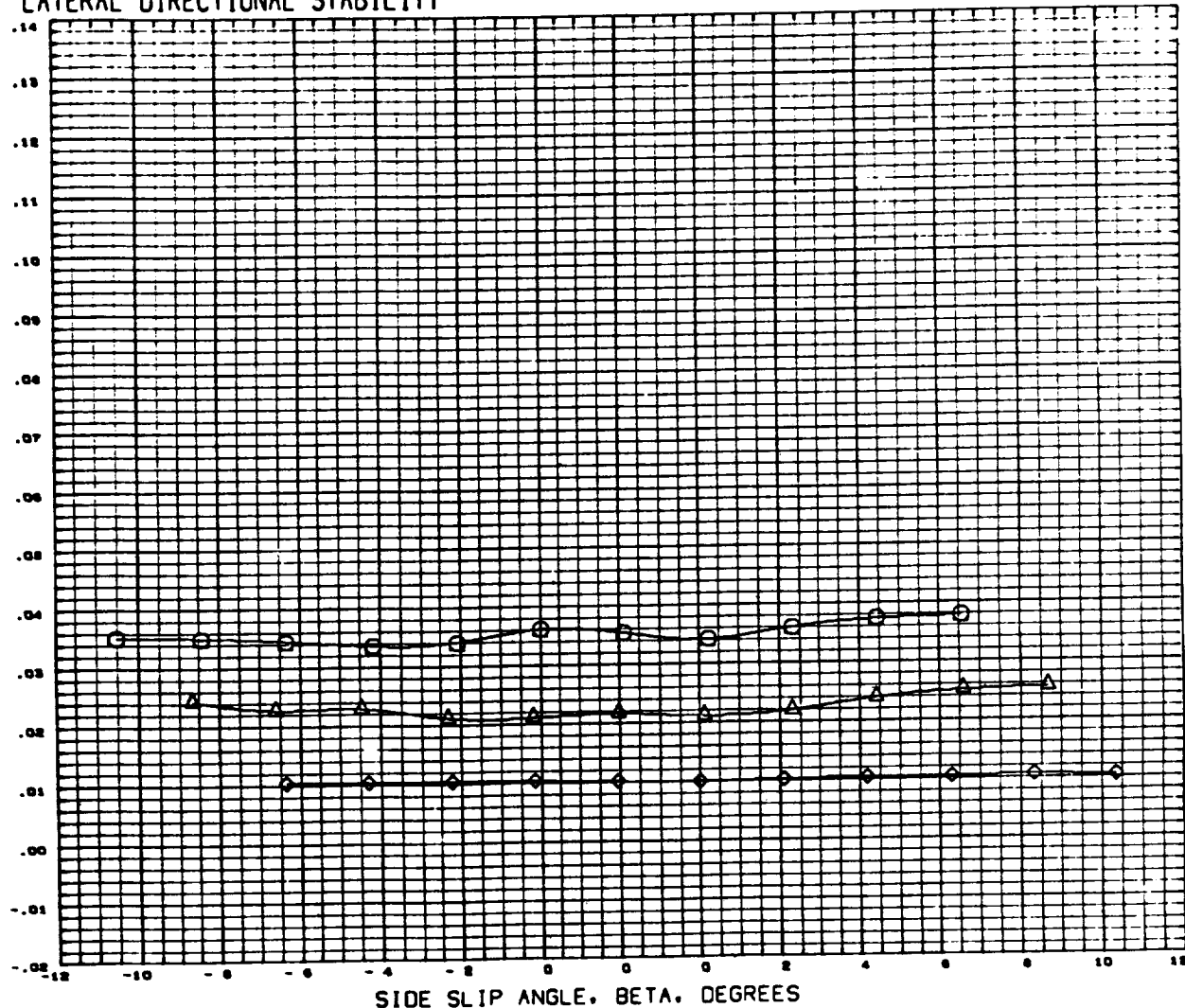
W9B2V1

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LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB

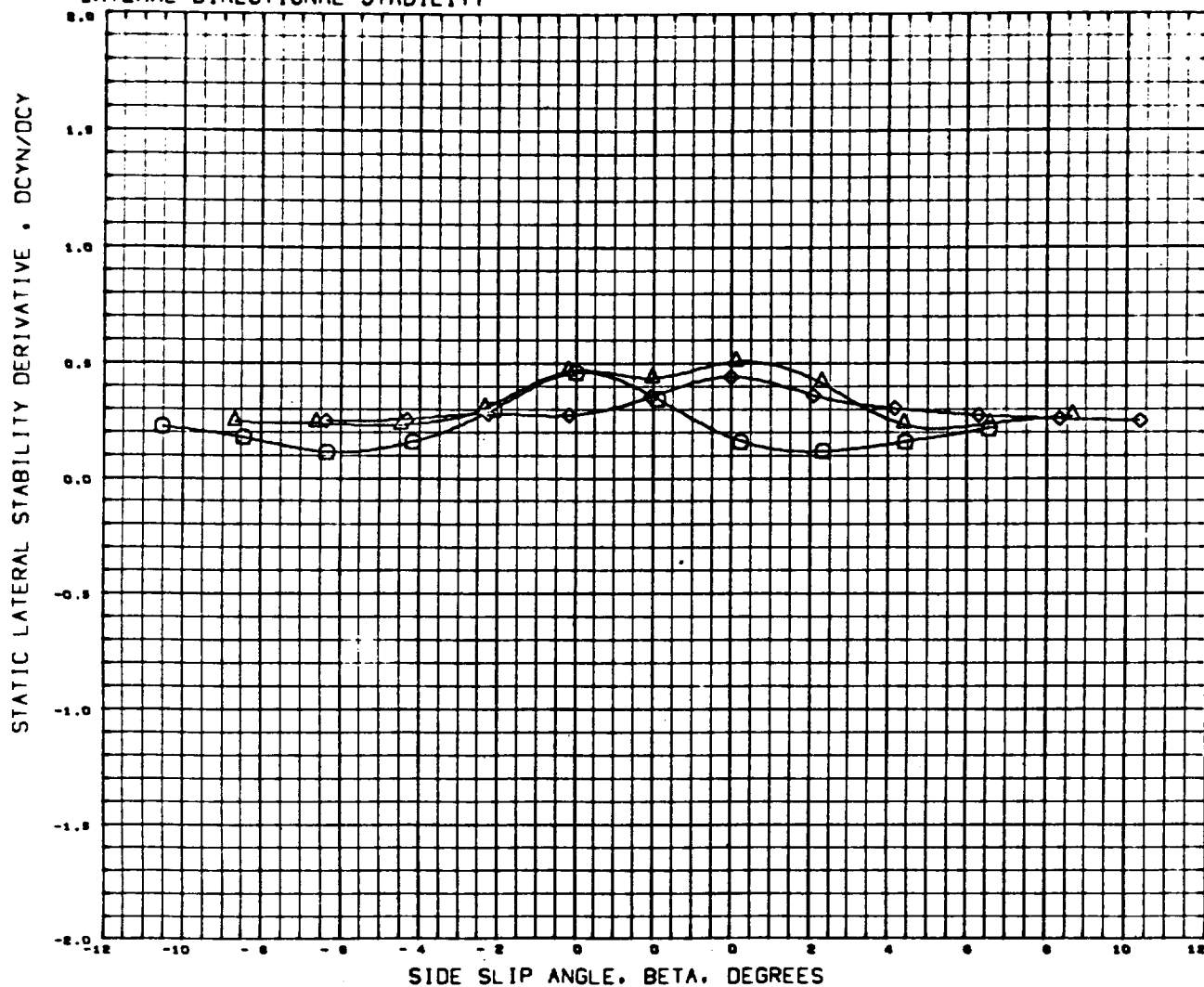


SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.201	ALPHA 15.000 DEL 0.000	SREF 7.7005 SQ. IN.
△	1.954	QER 0.000 ELEVTR 0.000	LREF 3.1700 IN.
◇	3.490	ALLRON 0.000	GREF 4.3920 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025 IN.

DATA HIST. CODE *E

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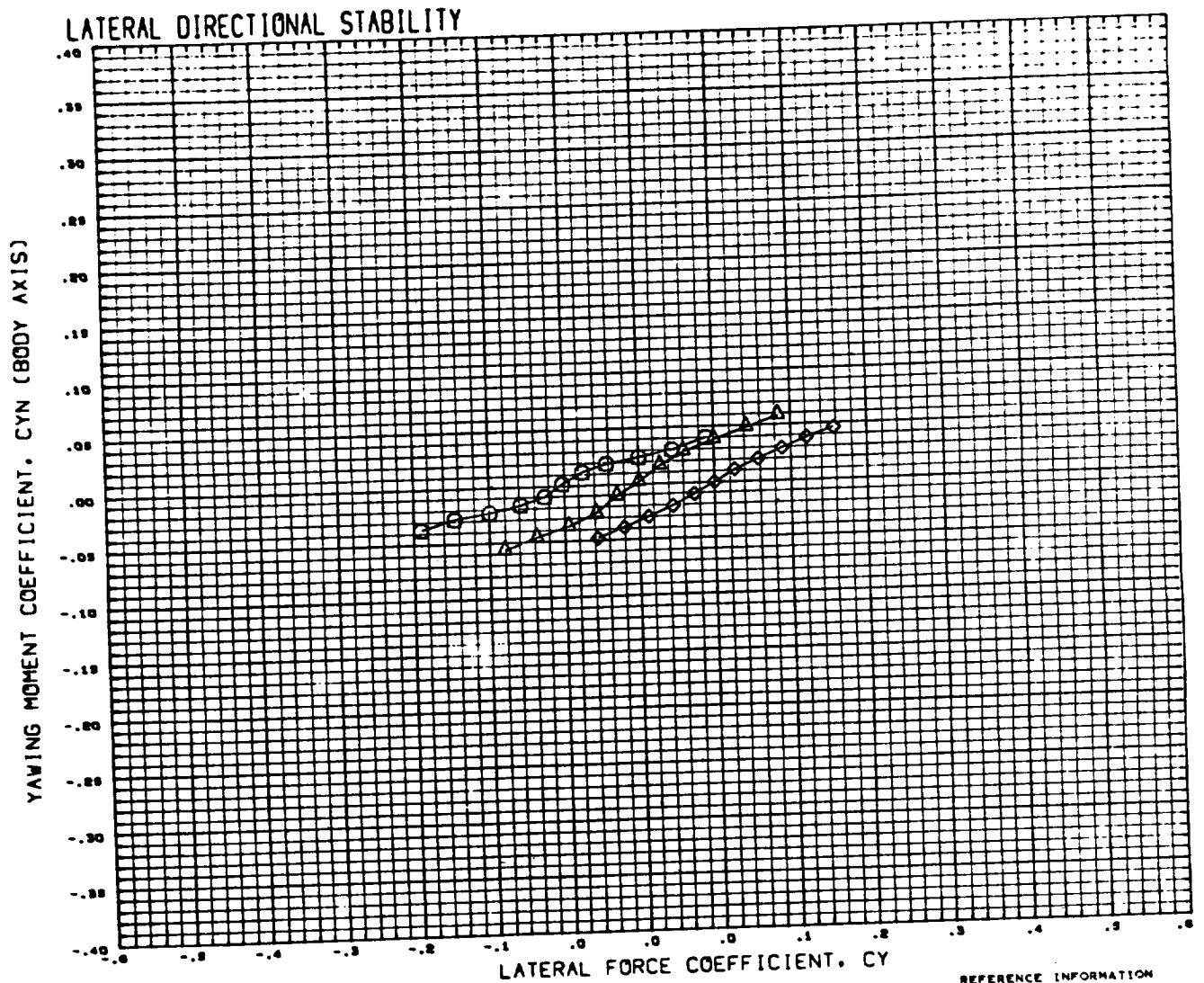
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.201	ALPHA	15.000	DEL	0.000
△	1.954	DER	0.000	ELEVTR	0.000
◇	3.480	ATLRON	0.000		

REFERENCE INFORMATION		
SRFP	7.7005	80. IN.
LRFP	3.1700	IN.
BRFP	4.3900	IN.
YHRP	2.4000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

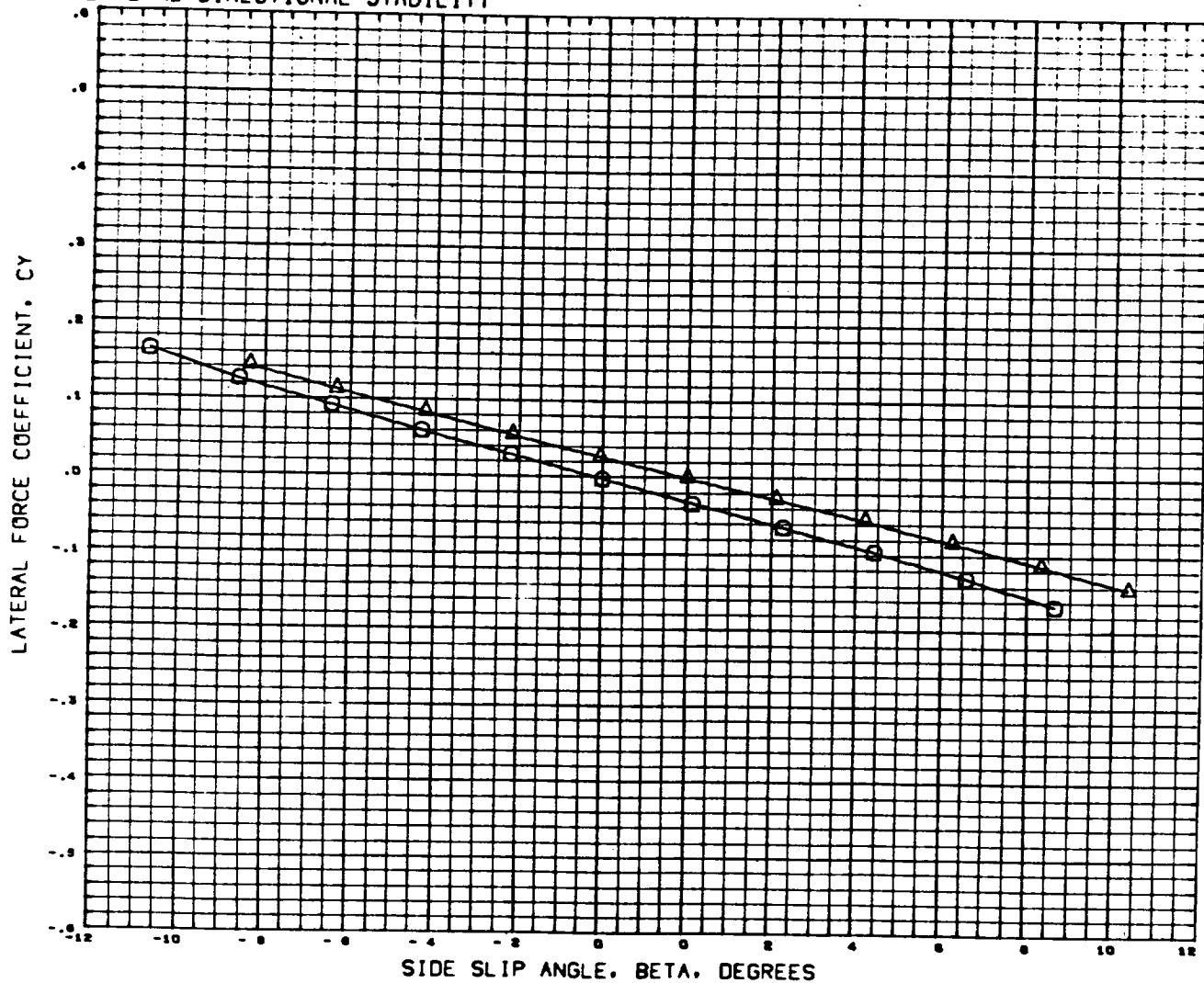


SYMBOL	MACH	PARAMETRIC VALUES
○	1.201	ALPHA 15.000 DEL 0.000
△	1.954	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000

REFERENCE INFORMATION		
SREF	7.7003	50. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E
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LATERAL DIRECTIONAL STABILITY

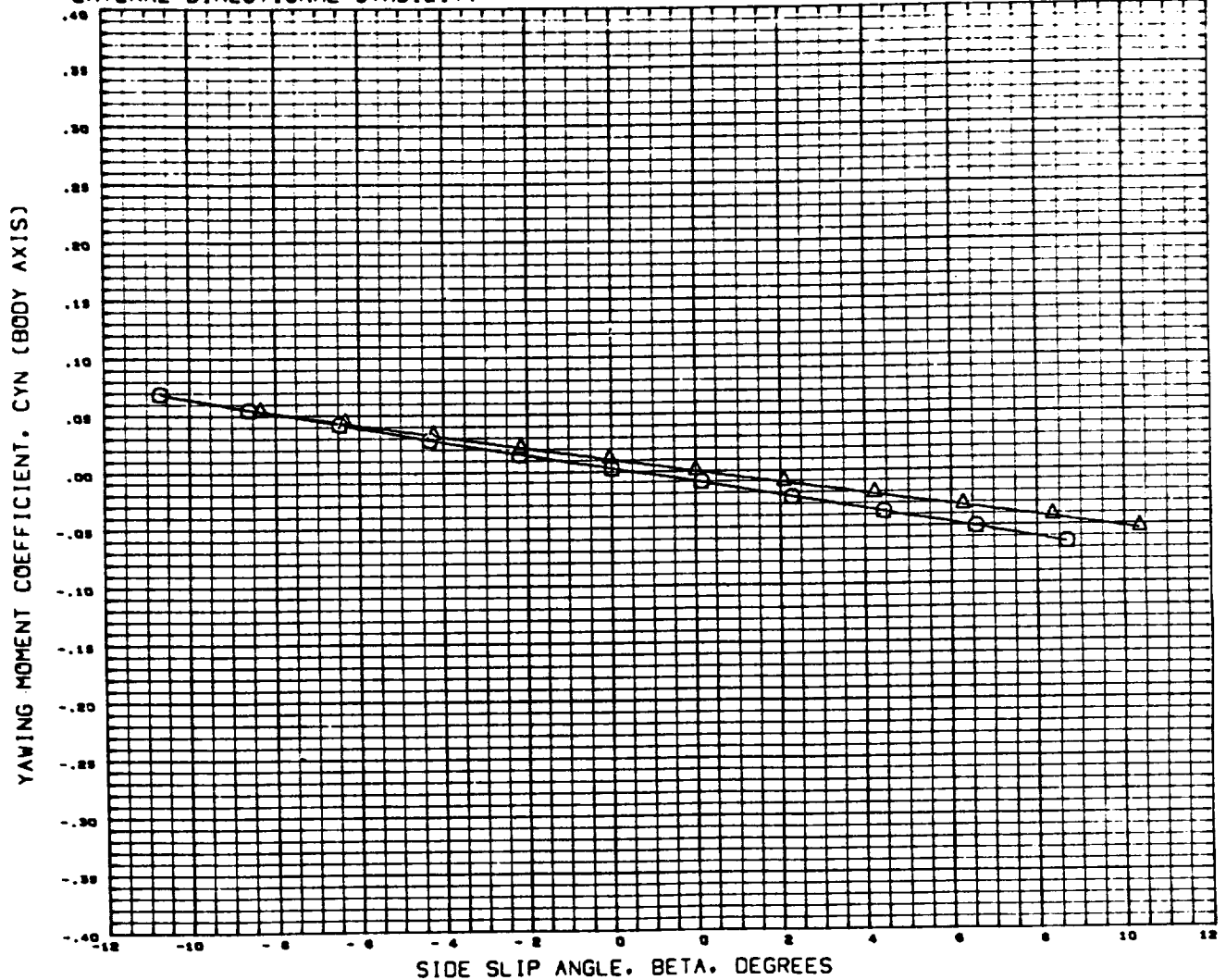


SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	1.959	ALPHA	15.000	DEL	0.000
	3.480	DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREF	7.7005	80. IN.
LREF	3.1700	IN.
BREF	4.3820	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

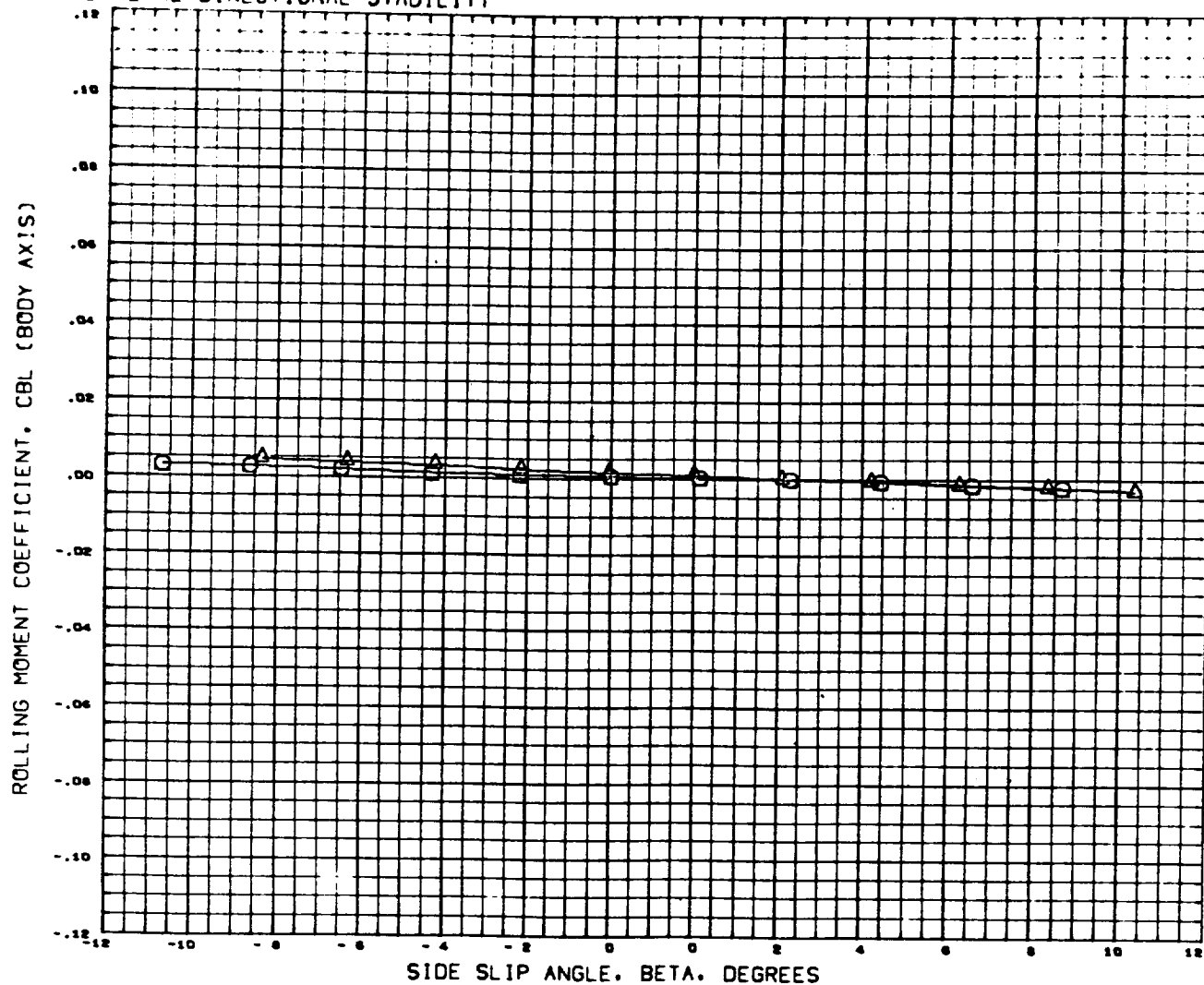


SYMBOL 	MACH	PARAMETRIC VALUES			
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	3.480	DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3520	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL



MACH

1.999
3.480

ALPHA
DER
AILRON

PARAMETRIC VALUES

19.000 DEL 0.000
0.000 ELEVTR 0.000
0.000

REFERENCE INFORMATION

SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
SREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

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AR11981-3

MODEL

W9B2

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES			
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	3.480	DER	0.000	ELEVTR	0.000
		ATTROH	0.000		

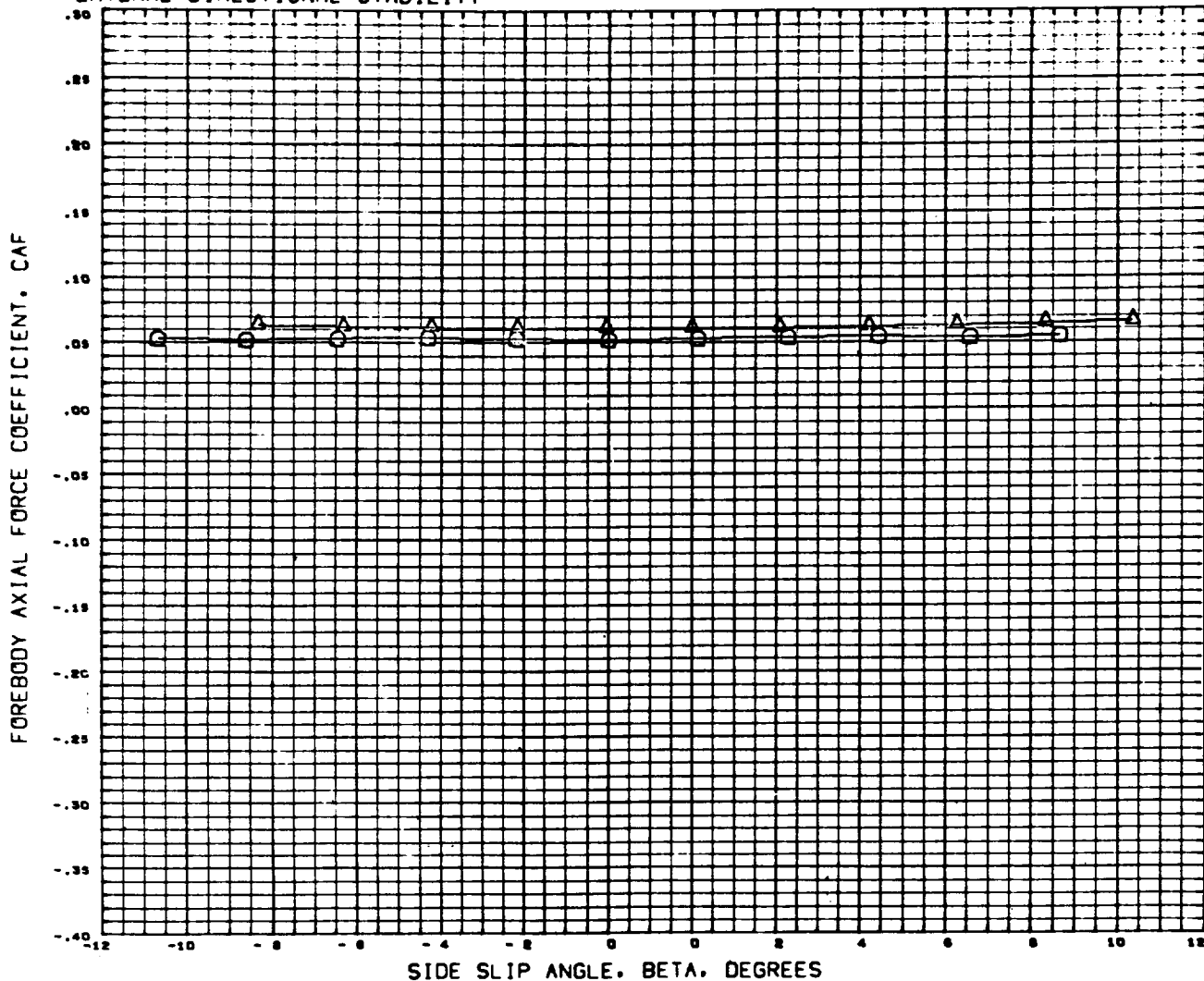
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LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982

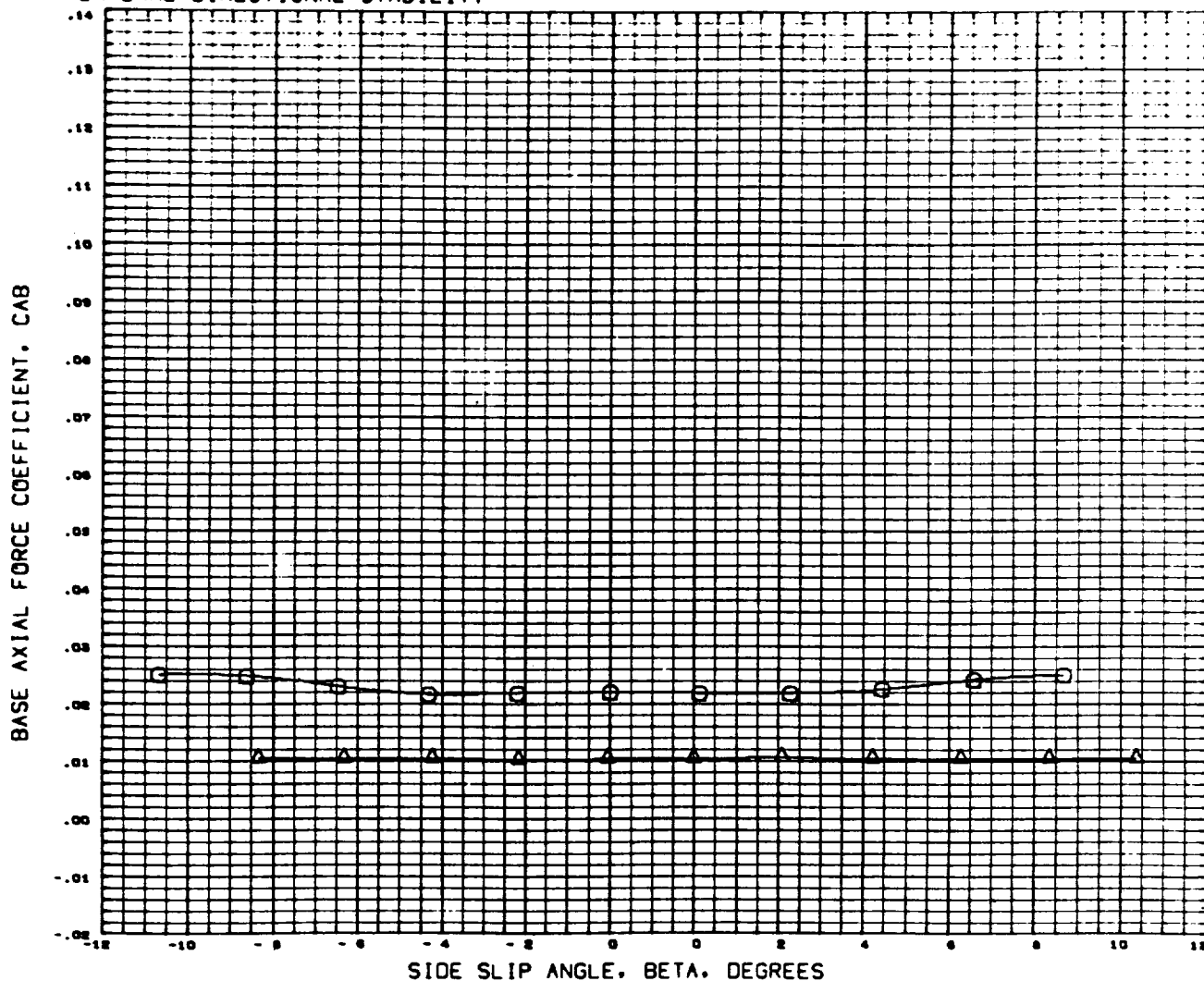
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LATERAL DIRECTIONAL STABILITY



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION	
O Δ	MACH	1.959	ALPHA	15.000	DEL	0.000	
		3.480	DER	0.000	ELEVTR	0.000	
			AILRON	0.000			
DATA HIST. CODE *E							
		BREF	7.7003	80. IN.			
		LREF	3.1700	IN.			
		QREF	4.3920	IN.			
		XMRP	8.4000	IN.			
		YMRP	0.0000	IN.			
		ZMRP	0.0000	IN.			
		SCALE	0.0025				

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.950	ALPHA 15.000 DEL 0.000	SREF 7.7005 SQ. IN.
△	3.460	DER 0.000 ELEVTR 0.000	LREF 3.1700 IN.
		AILRON 0.000	BREF 4.3920 IN.
			XHRP 2.4000 IN.
			YHRP 0.0000 IN.
			ZHRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W9B2

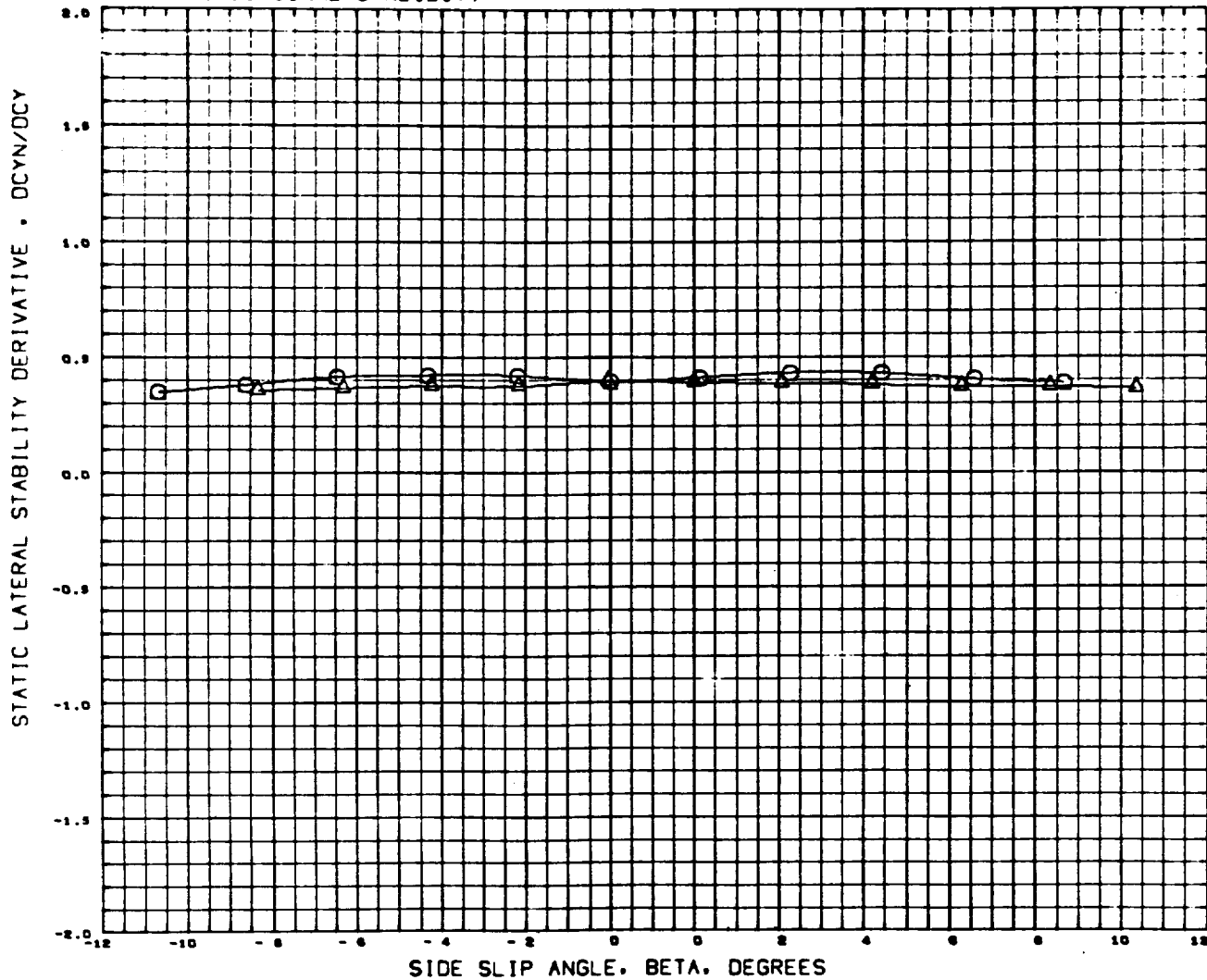
(E3822H)

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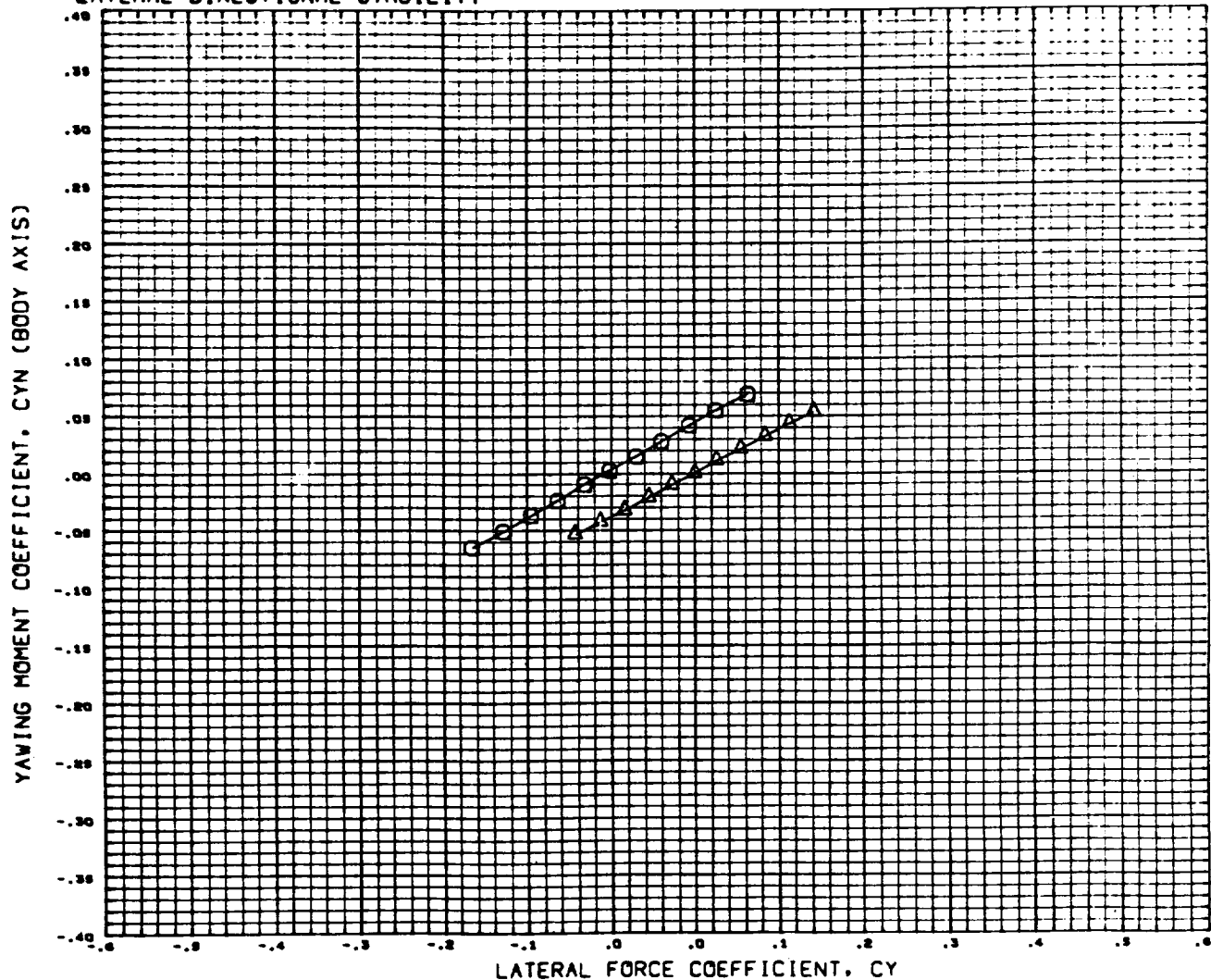
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	1.959	3.480	ALPHA	DEL	ELEVTR	DEL	BREF	LREF	YREF
			19.000	0.000	0.000	0.000	7.7003	3.1700	4.3920
			0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
			0.000	0.000	0.000	0.000	0.0000	0.0000	0.0023

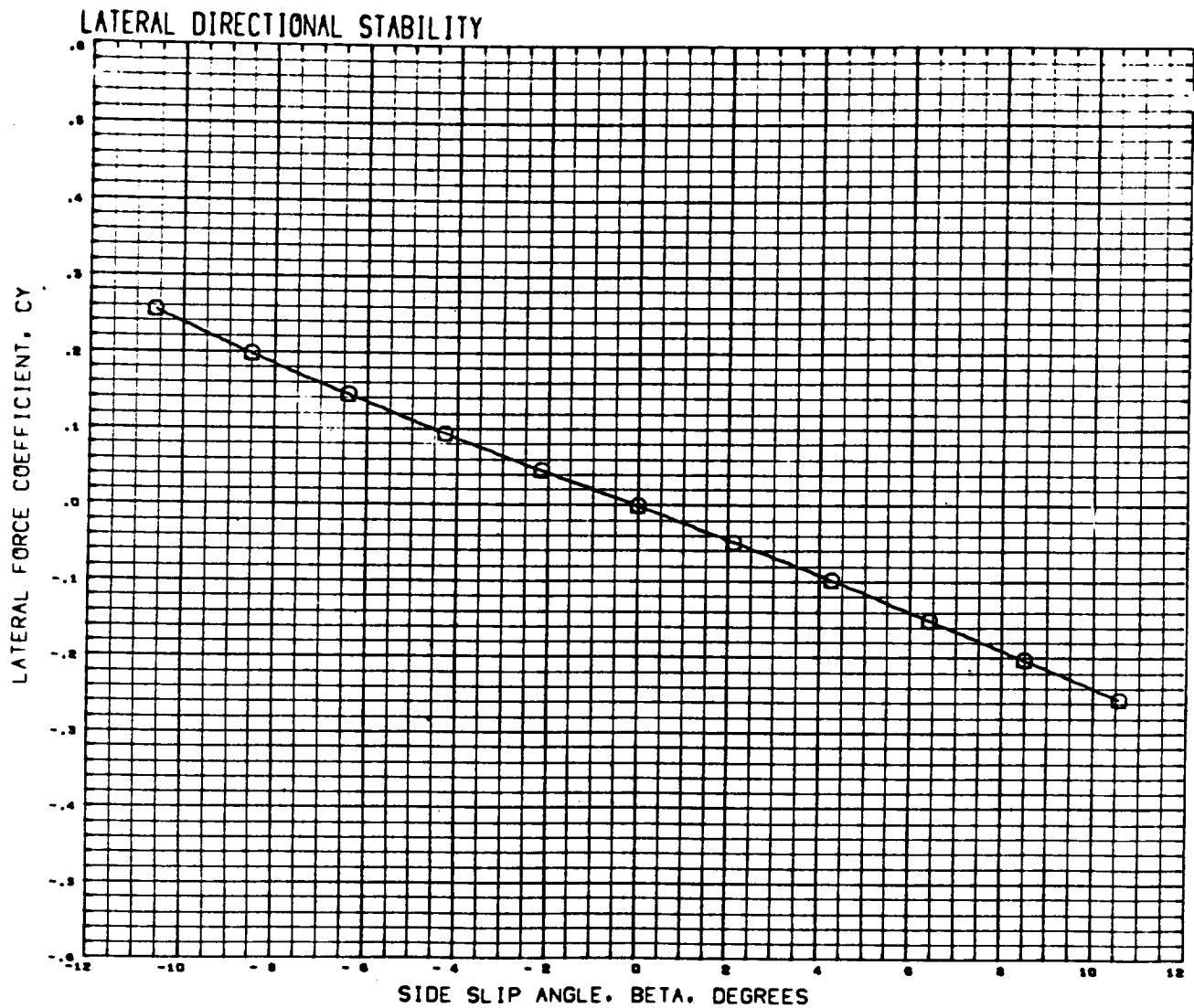
DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	AILRON	SREP	LREF	BREF
○	1.959	15.000	0.000	0.000		7.7005	3.1700	4.3920
△	3.460	0.000	0.000	0.000		2.4000	0.0000	0.0023

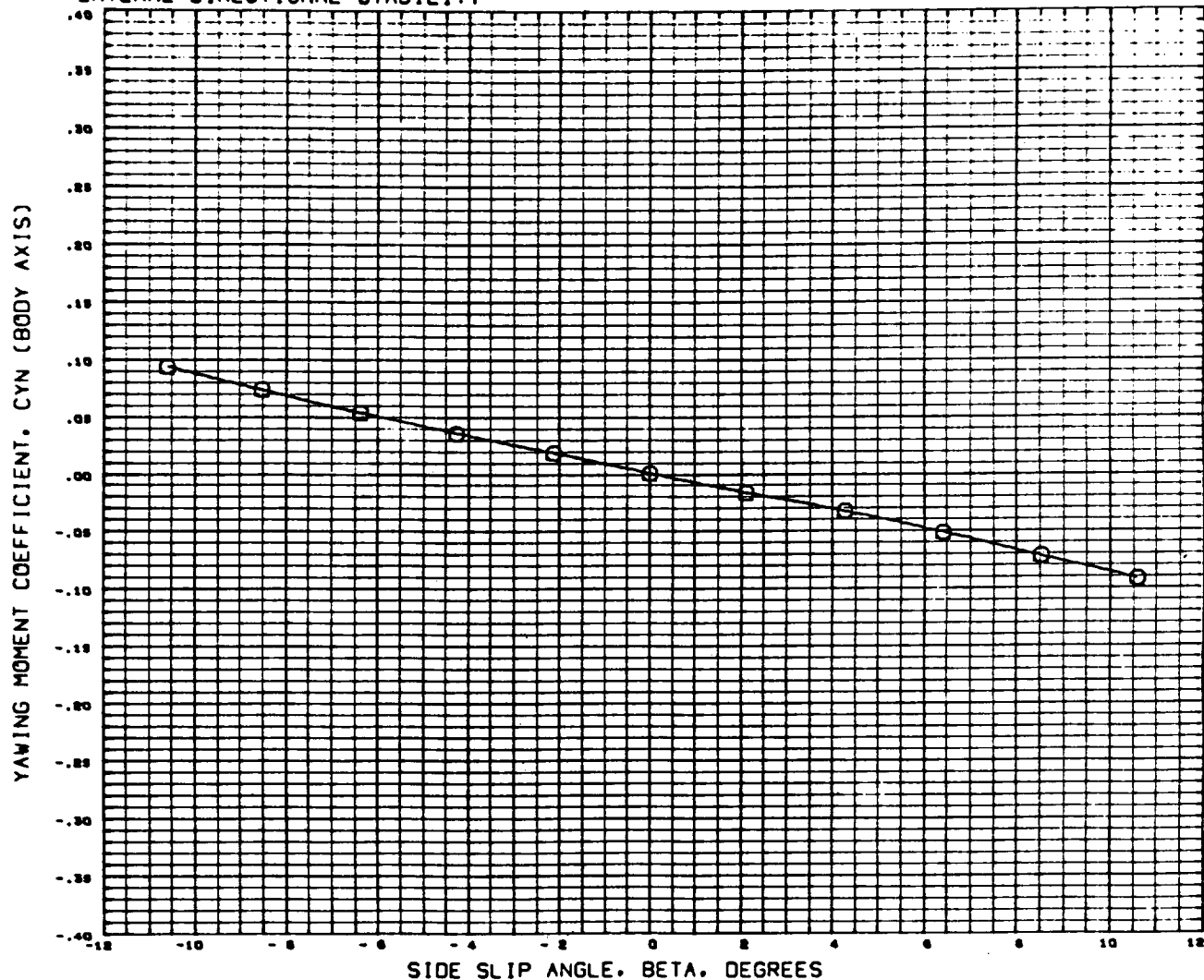
DATA HIST. CODE 0E M496-MSFC AR11981-3 MODEL W982 (E3822H) 06 SEP 72 PAGE 286



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR			
○	1.945	15.000	0.000	0.000		BREF	4.9327 SQ. IN.
		DER	0.000	0.000		LREF	1.8980 IN.
		ATLRON	0.000			BREF	3.7200 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025 IN.

DATA HIST. CODE *E

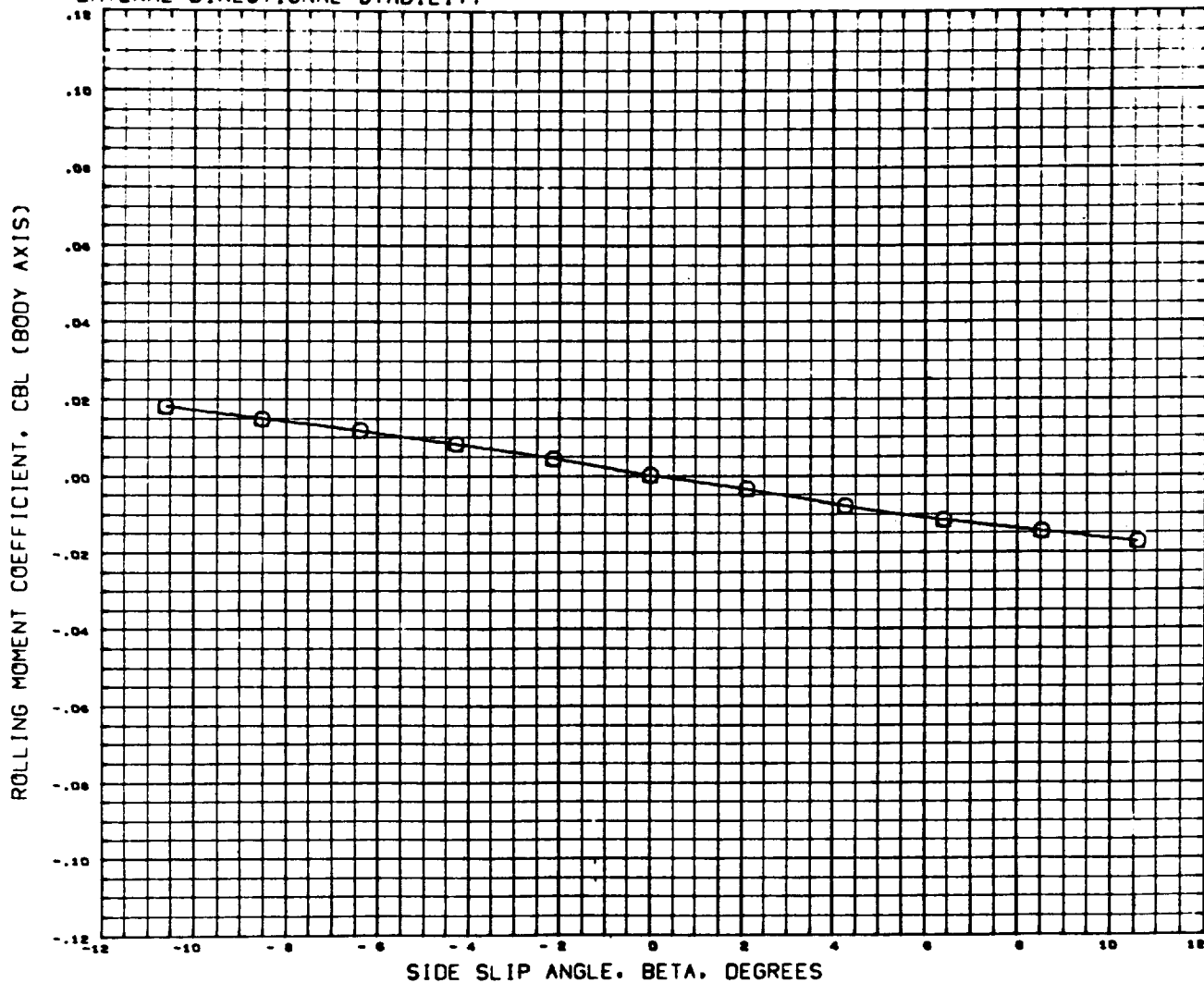
LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.949		ALPHA	19.000	DEL	0.000	SREP	4.9327	SQ. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.6980	IN.
				AILRON	0.000			BREF	3.7200	IN.
								XMRP	2.4000	IN.
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DATA HIST. CODE *E

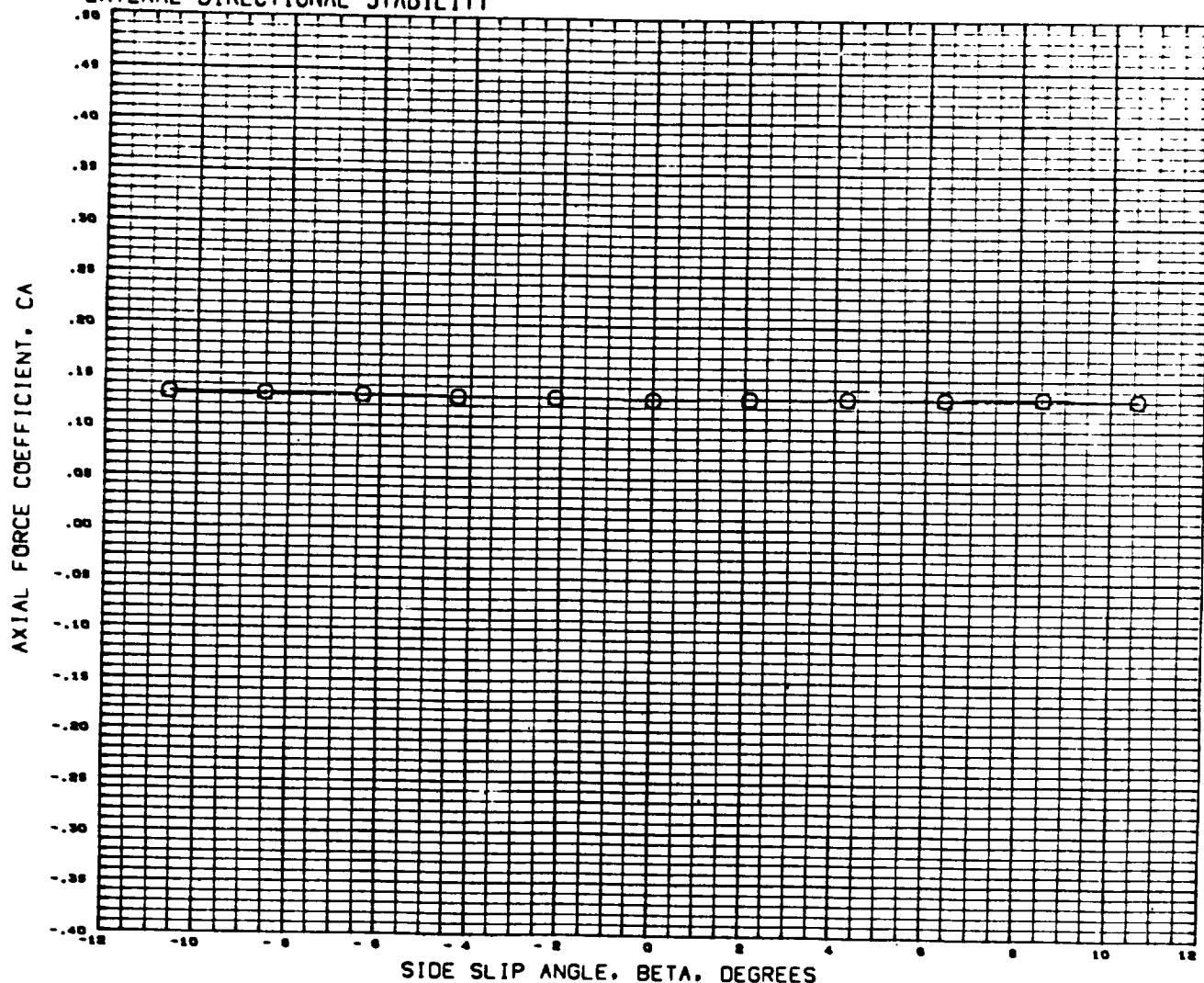
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	SCALE	BREF	LREF	YREF
○	1.945	15.000	0.000	0.000		4.9327	1.8980	3.7200
		0.000				2.4000	0.0000	0.0000
		0.000				0.0000	0.0000	0.0025

DATA HIST. CODE 0E

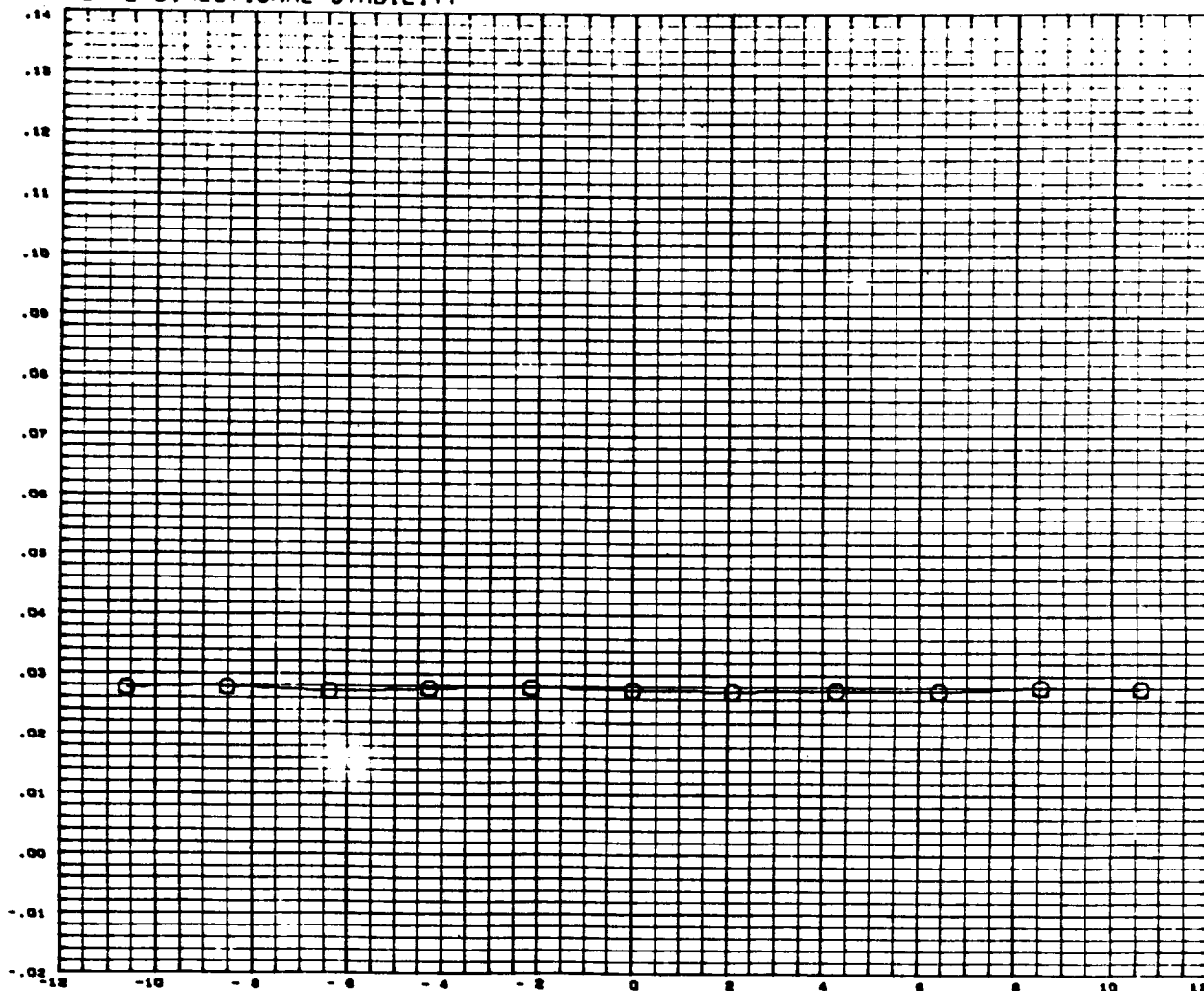
LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES		REFERENCE INFORMATION	
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		ALPHA	19.000	DEL	0.000	SREP	4.9327
		DER	0.000	ELEVTR	0.000	LRFP	1.8980
		ATLRON	0.000			BRFP	3.7200
						XMRP	2.4000
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025
DATA HIST. CODE *E							
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LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, C_{AB}



SIDE SLIP ANGLE, β , DEGREES

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.949	ALPHA	15.000	DEL	0.000	SREF	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LRFP	1.6960	IN.
		ATLROM	0.000			BRFP	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

MODEL

W482V2

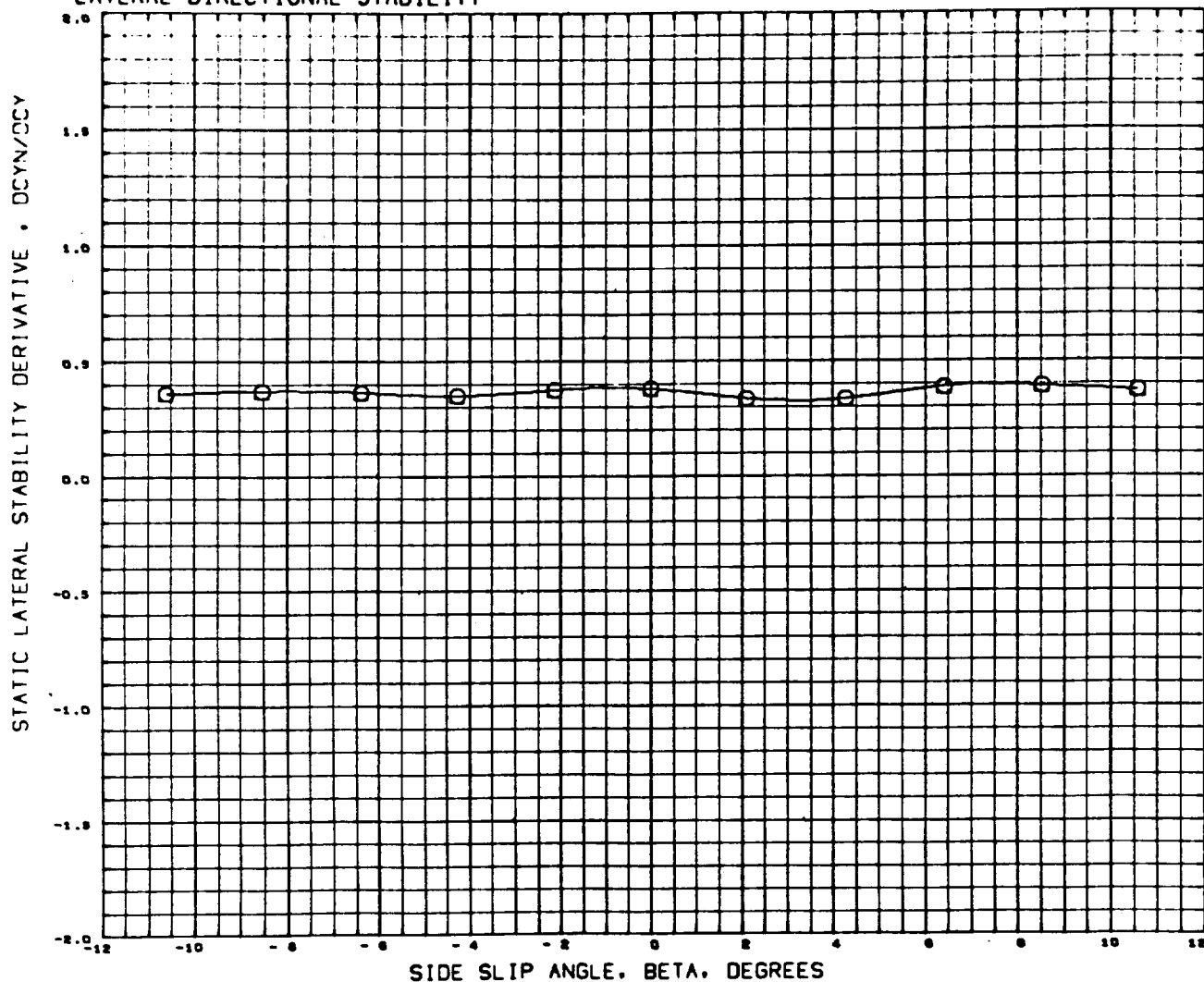
(E3828H)

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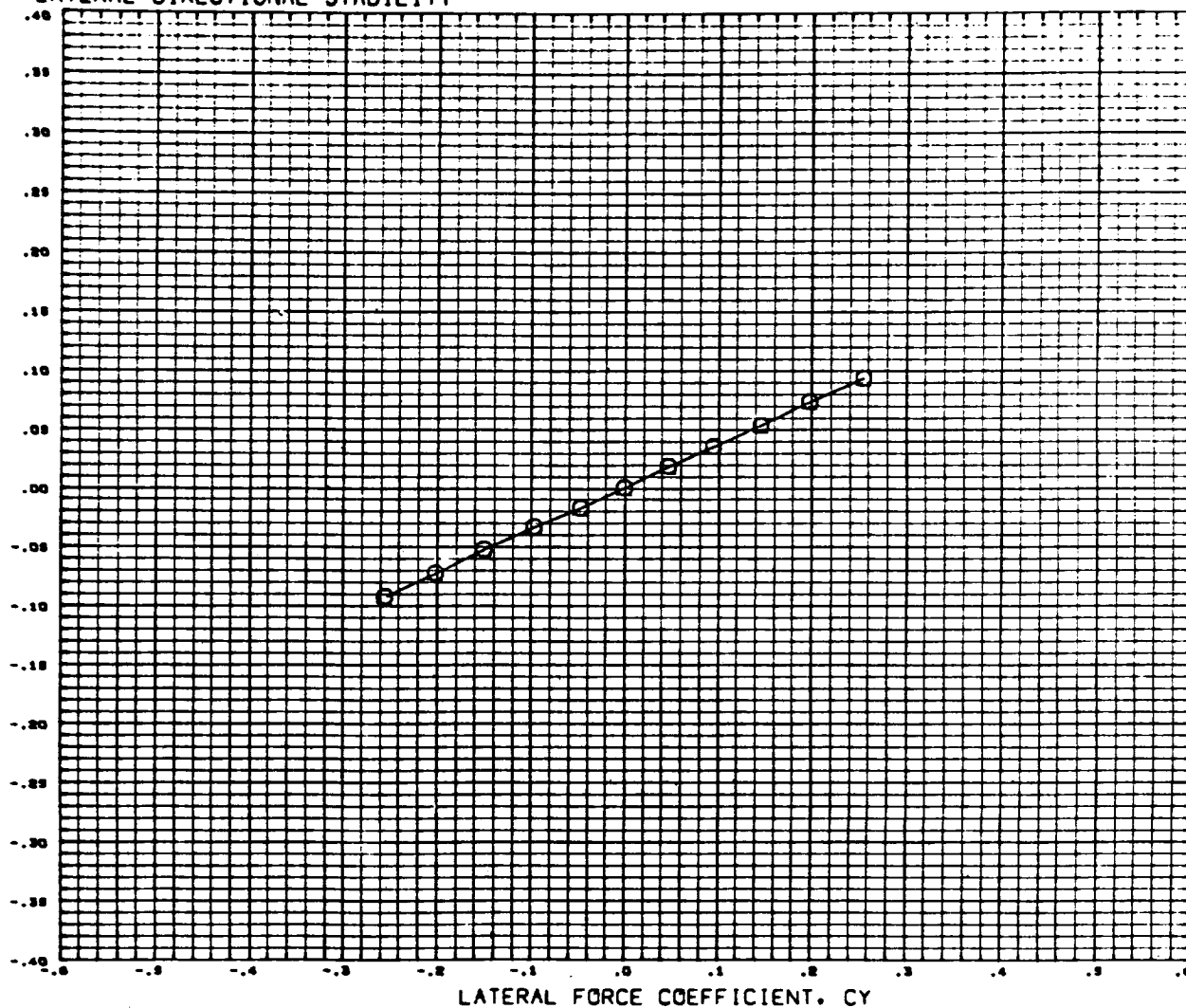
LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
○		1.945		ALPHA	15.000	DEL	0.000	BREF	4.9327	80.1M.
				DER	0.000	ELEVTR	0.000	LREF	1.6960	1M.
				ATLRON	0.000			BREF	3.7200	1M.
								WHRP	2.4000	1M.
								YHRP	0.0000	1M.
								ZHRP	0.0000	1M.
								SCALE	0.0025	

DATA HIST. CODE *E

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
Q		1.948		ALPHA	15.000	DEL	0.000	SREP	4.9327	30. IN.	
				DER	0.000	ELEVTR	0.000	LREP	1.8980	IN.	
				ATLRON	0.000			BREP	3.7600	IN.	
								XMRP	2.4000	IN.	
								TMRP	0.0000	IN.	
								ZMRP	0.0000	IN.	
								SCALE	0.0025		

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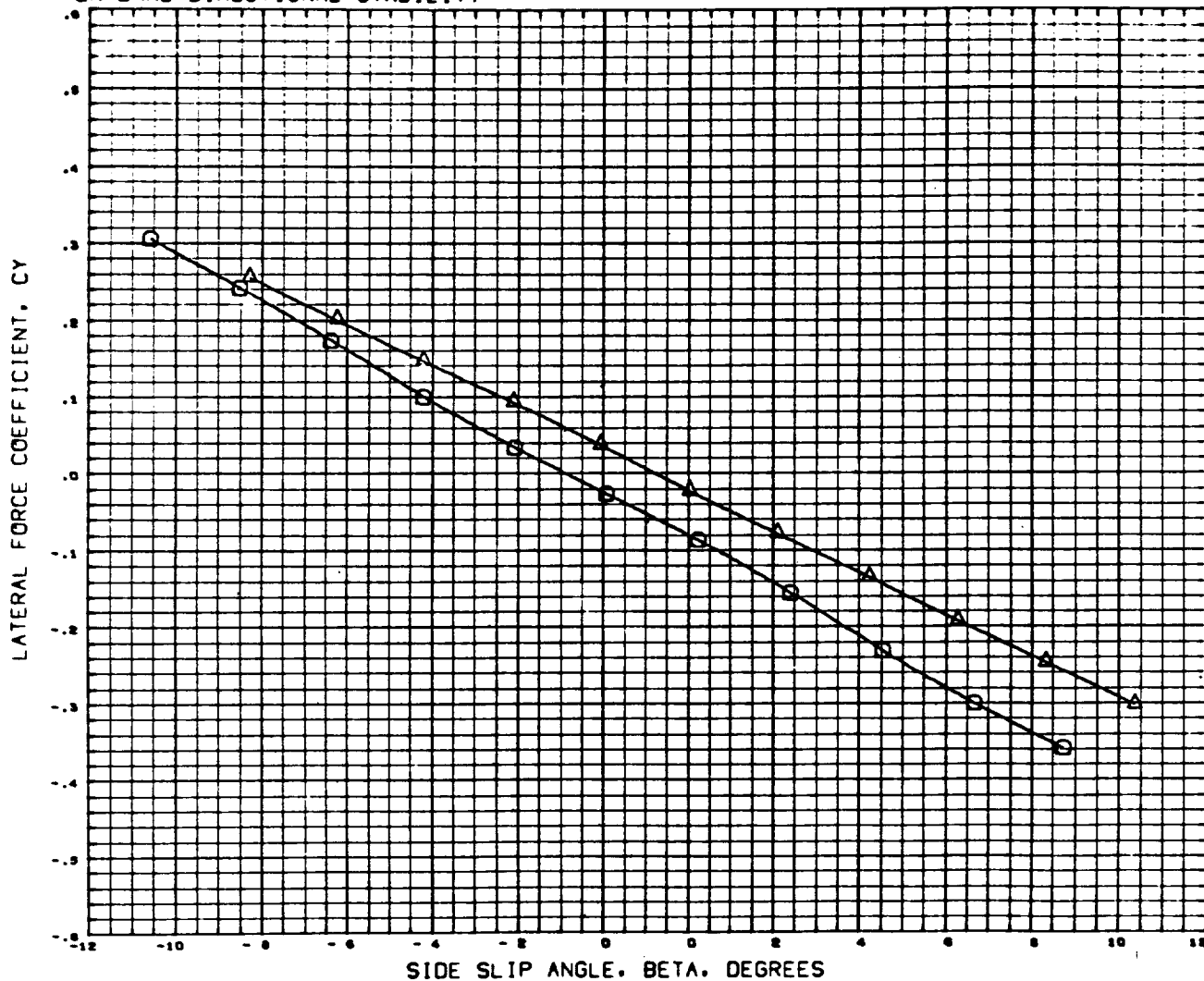
MODEL

W482V2

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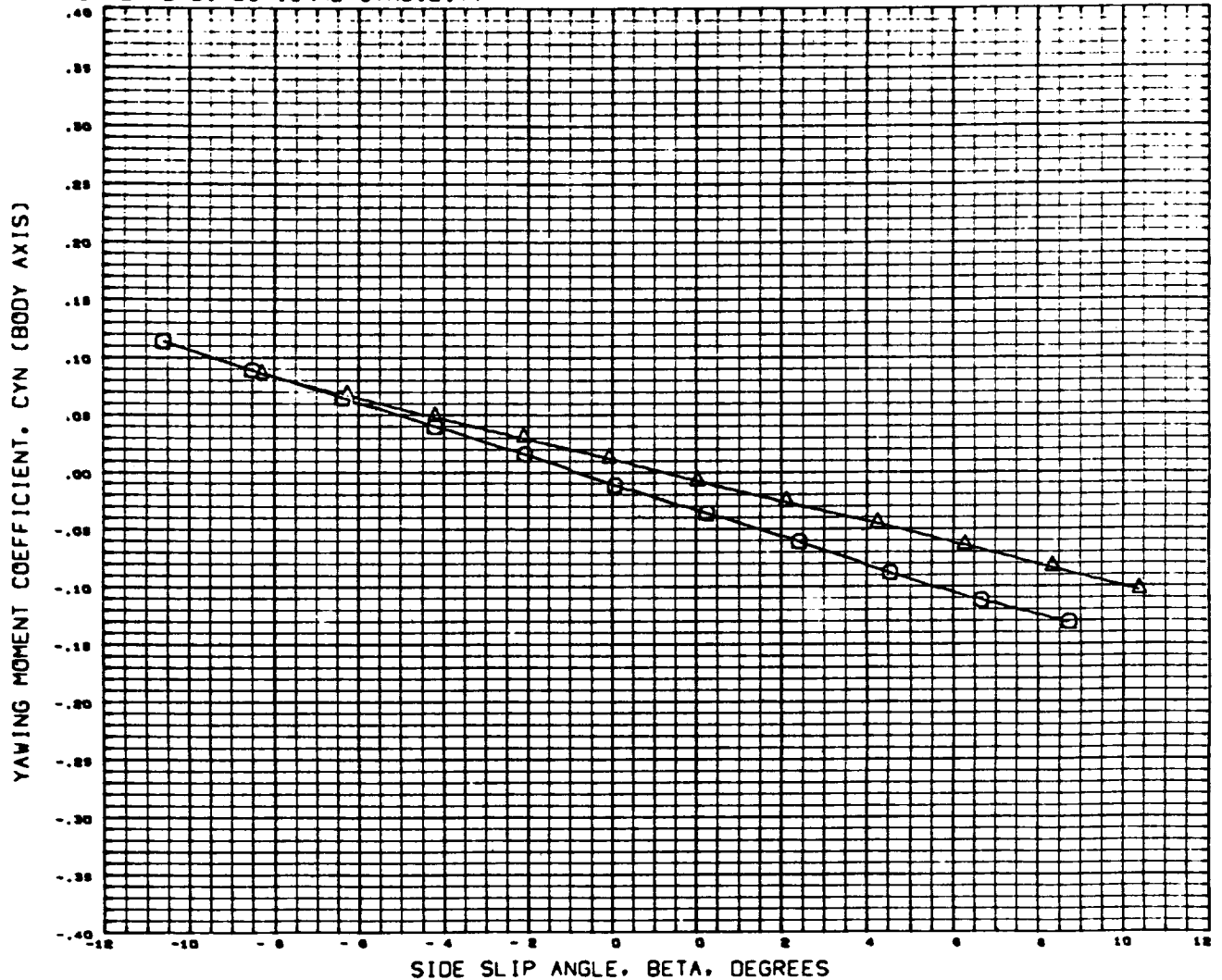
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR			
○	1.951	30.000	0.000	0.000		SREF	4.6225 80. IN.
△	3.480	0.000	0.000	0.000		LREF	1.9360 IN.
		ATLRON	0.000			BREF	4.3000 IN.
						XNRP	3.4000 IN.
						YNRP	0.0000 IN.
						ZNRP	0.0000 IN.
						SCALE	0.0025

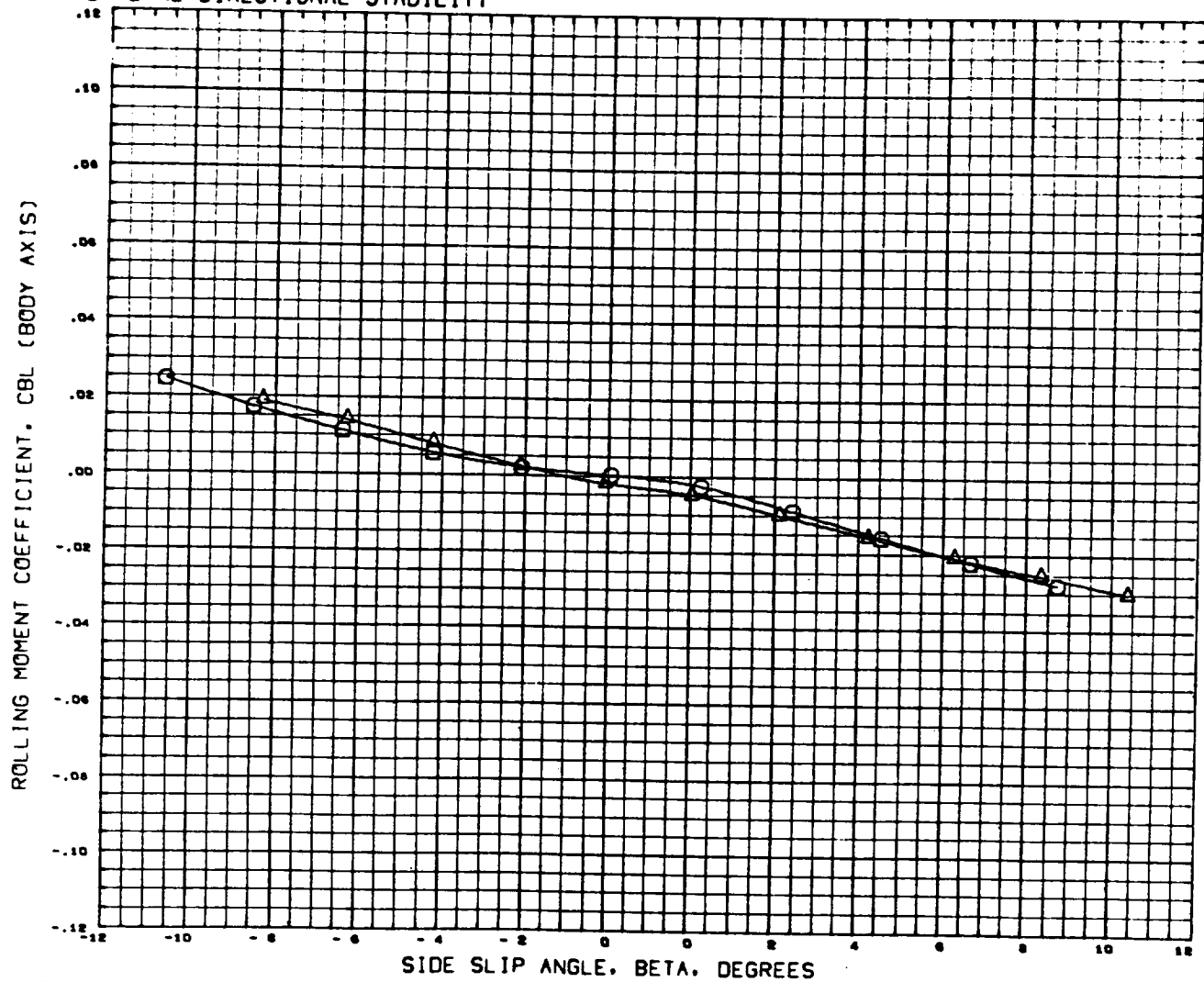
DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.951	ALPHA 30.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	3.480	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
		ATLRON 0.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

LATERAL DIRECTIONAL STABILITY

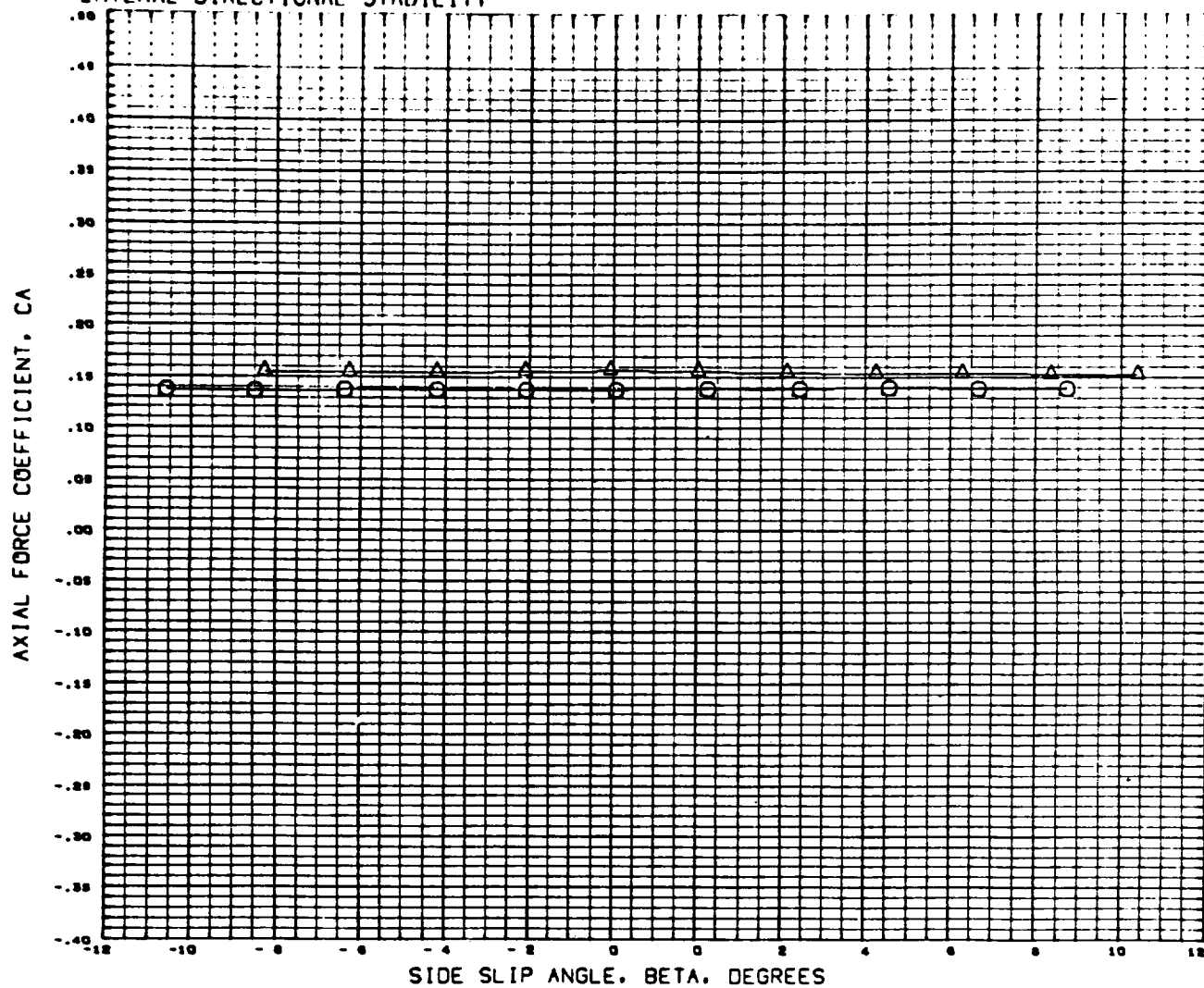


SYMBOL 	MACH	PARAMETRIC VALUES			
	1.951	ALPHA	30.000	DEL	0.000
	3.490	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREP	4.6225	SQ. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



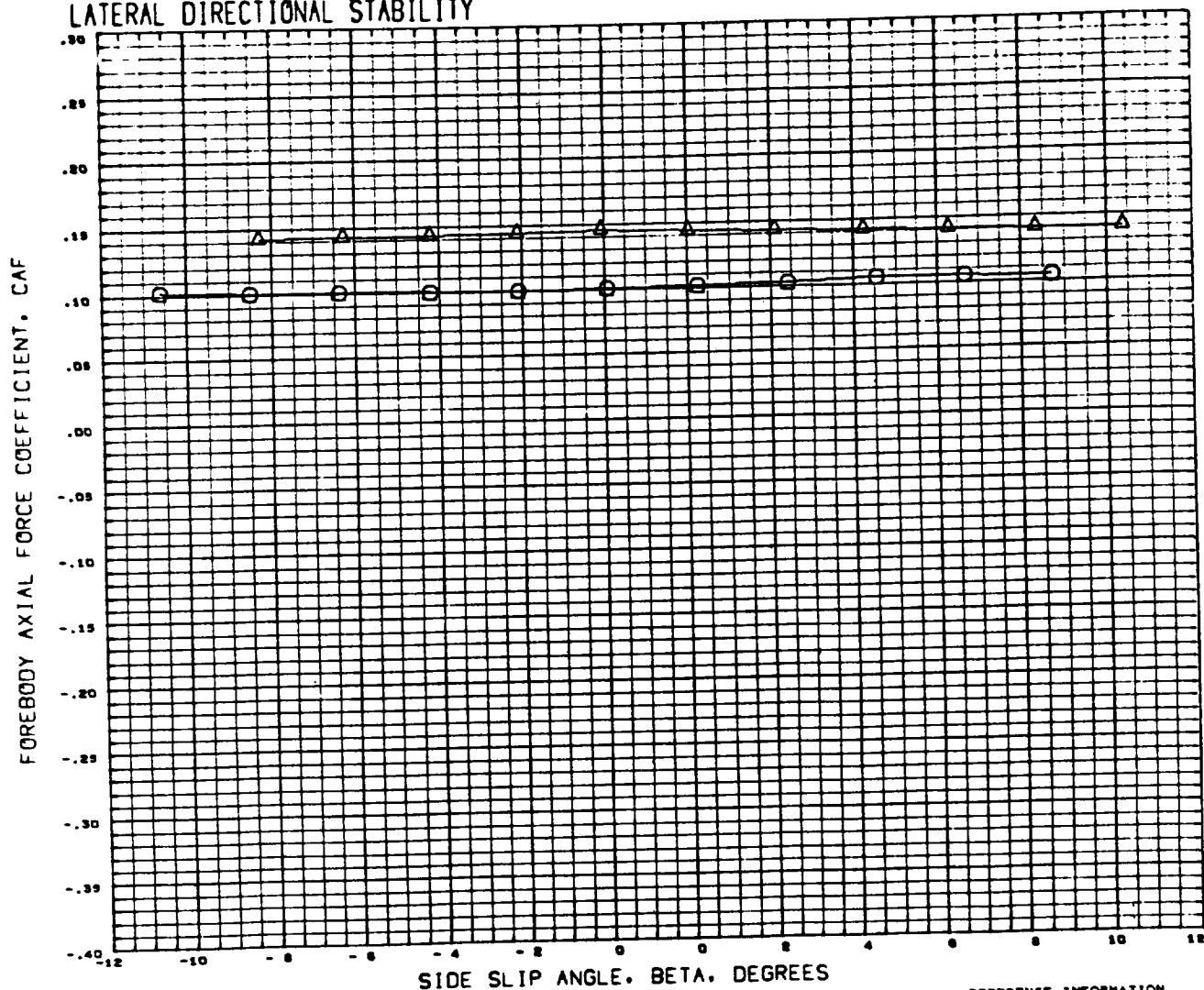
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○	1.991	ALPHA	30.000	DEL	0.000
△	3.480	DER	0.000	ELEVTR	0.000
		ATLROM	0.000		

REFERENCE INFORMATION		
SREF	4.6225	30. IN.
LREF	1.5383	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE WE

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LATERAL DIRECTIONAL STABILITY



SYMBOL ○ △	MACH	PARAMETRIC VALUES			
	1.951	ALPHA	30.000	DEL	0.000
	3.480	DER	0.000	ELEVTR	0.000
		ATLON	0.000		

REFERENCE INFORMATION		
SREP	4.6225	sq.in.
LREP	1.5360	in.
BREP	4.3000	in.
YMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE SE

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AR11981-3

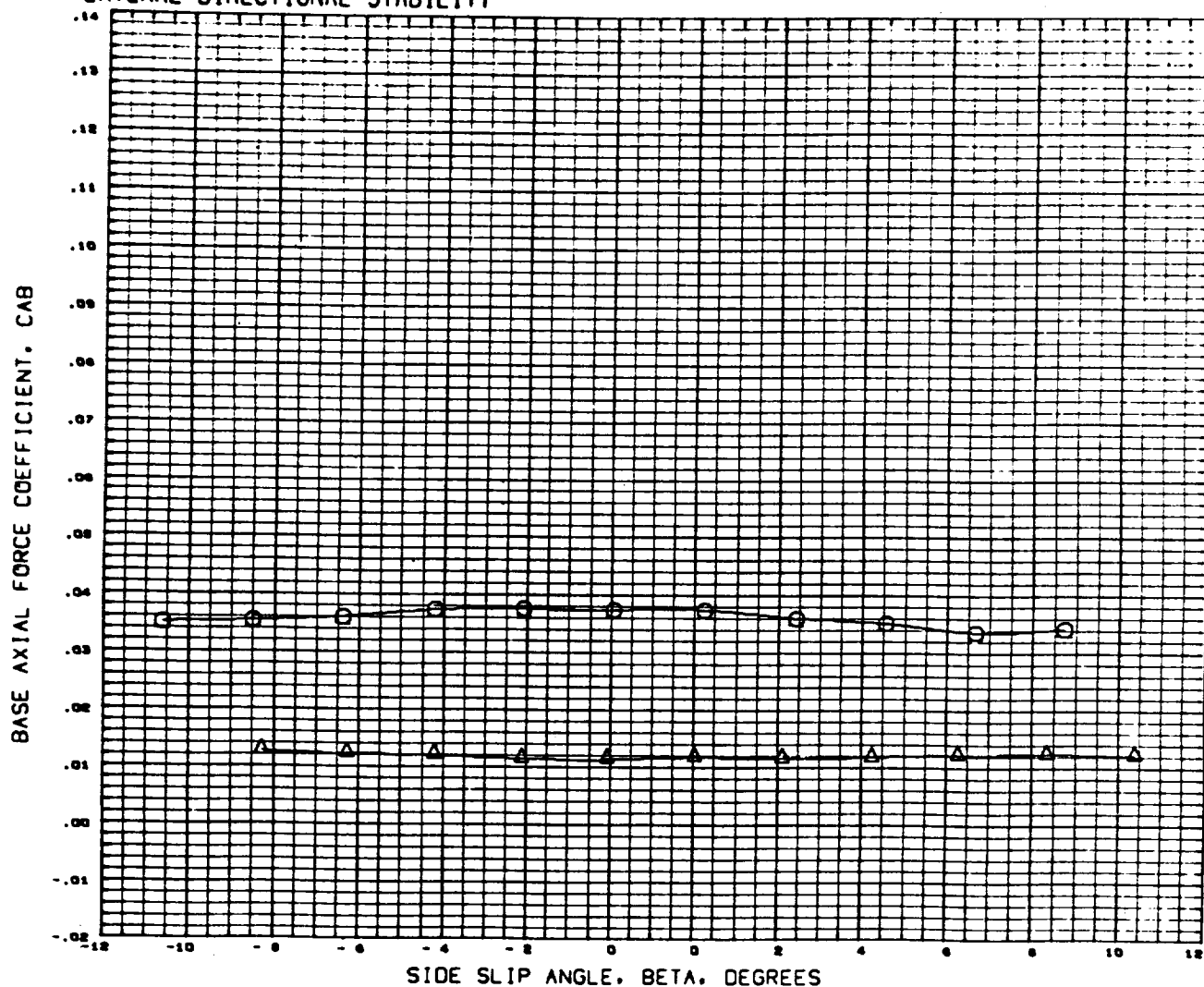
MODEL

W6B2

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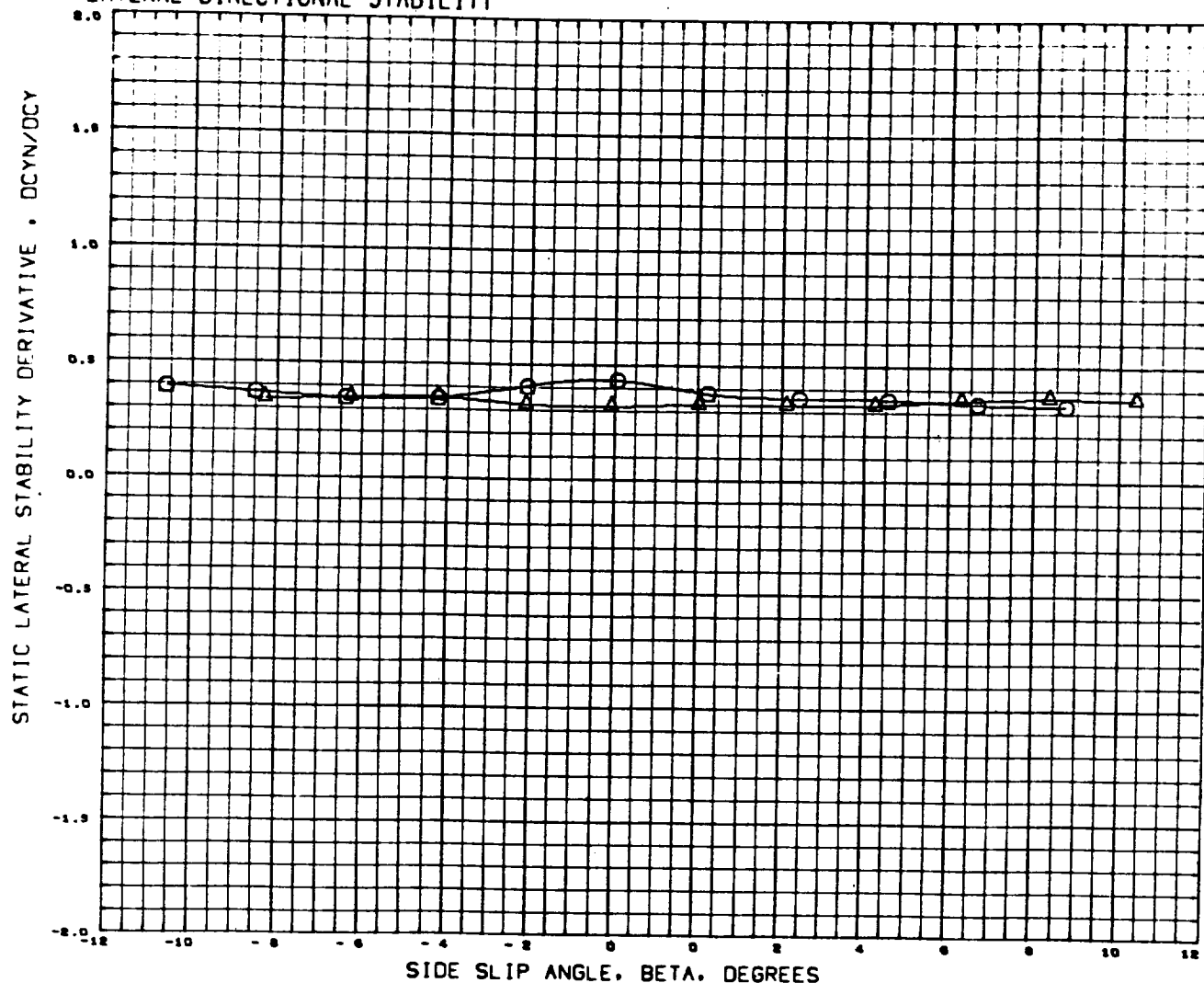
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	1.931	3.480	ALPHA	30.000	DEL	0.000	SREF	4.6225	50. IN.
			DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
			ATLRON	0.000			BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	IN.

DATA HIST. CODE *C

LATERAL DIRECTIONAL STABILITY

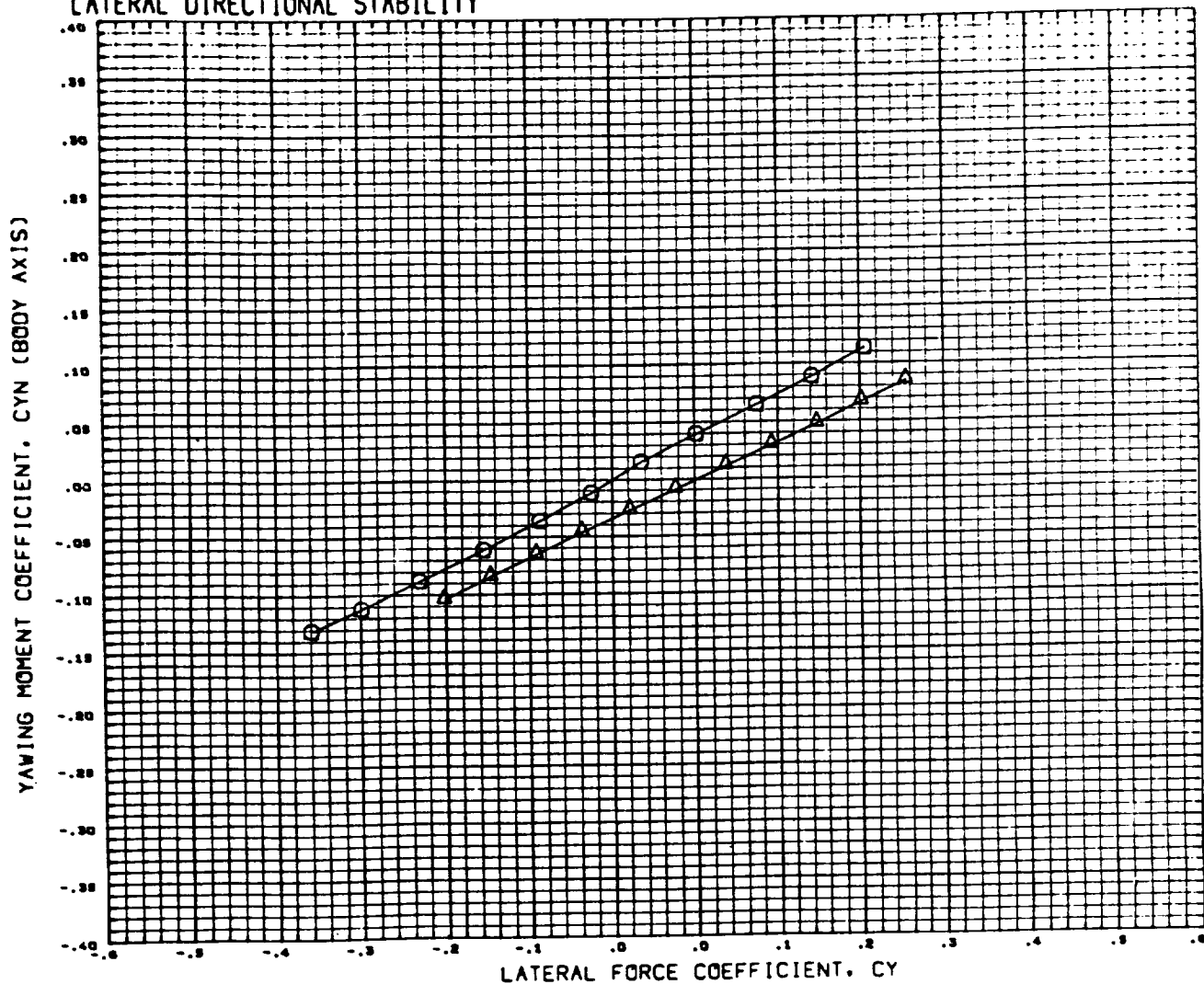


SYMBOL 	MACH	PARAMETRIC VALUES			
	1.951	ALPHA	30.000	DEL	0.000
	3.480	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
ZMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR		SREF		SG, IN.
○ △	1.981	30.000	0.000	0.000		LREF	1.5360	IN.
	3.480	0.000	0.000	0.000		BREF	4.3000	IN.
		AILRON	0.000			XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W682

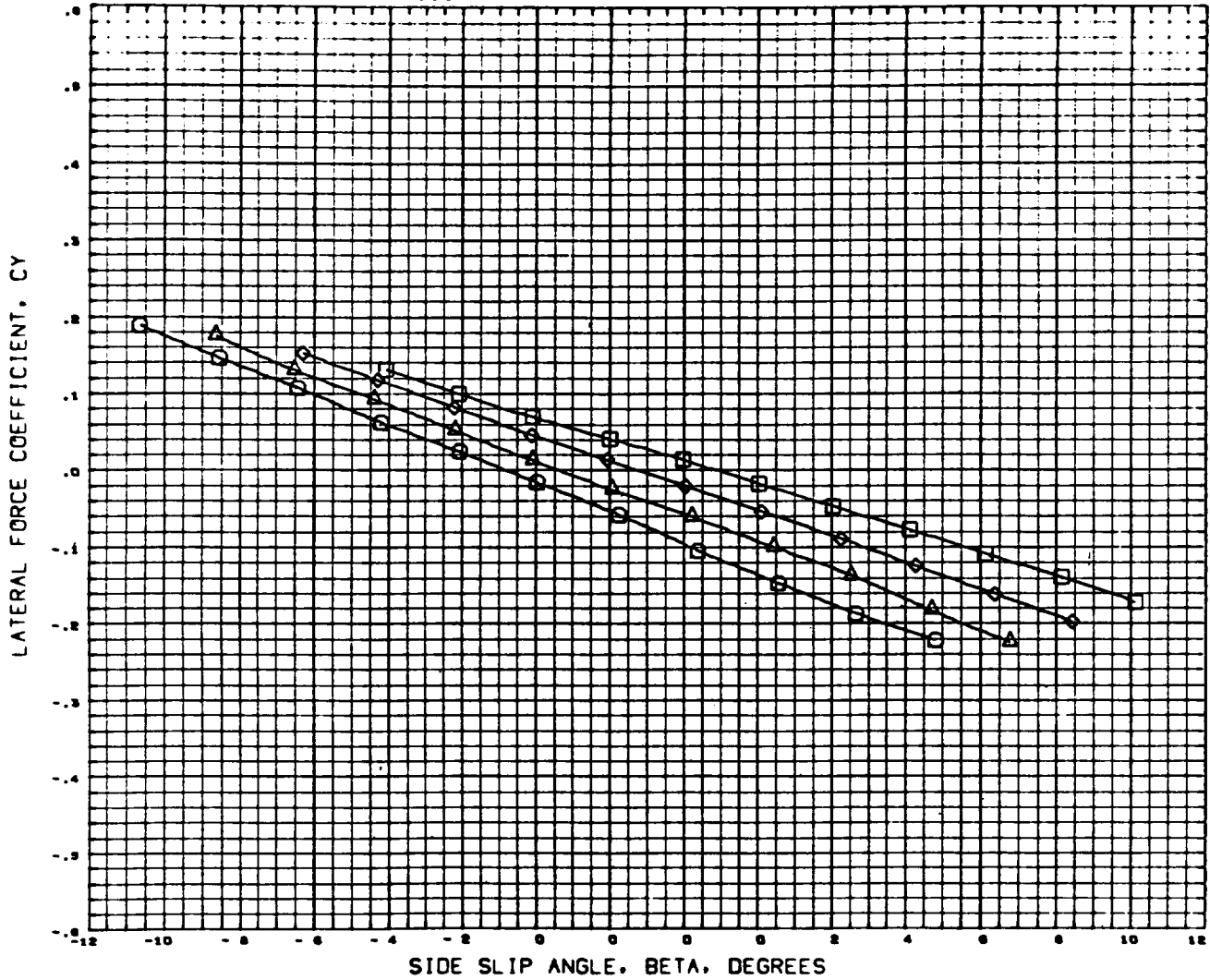
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LATERAL DIRECTIONAL STABILITY

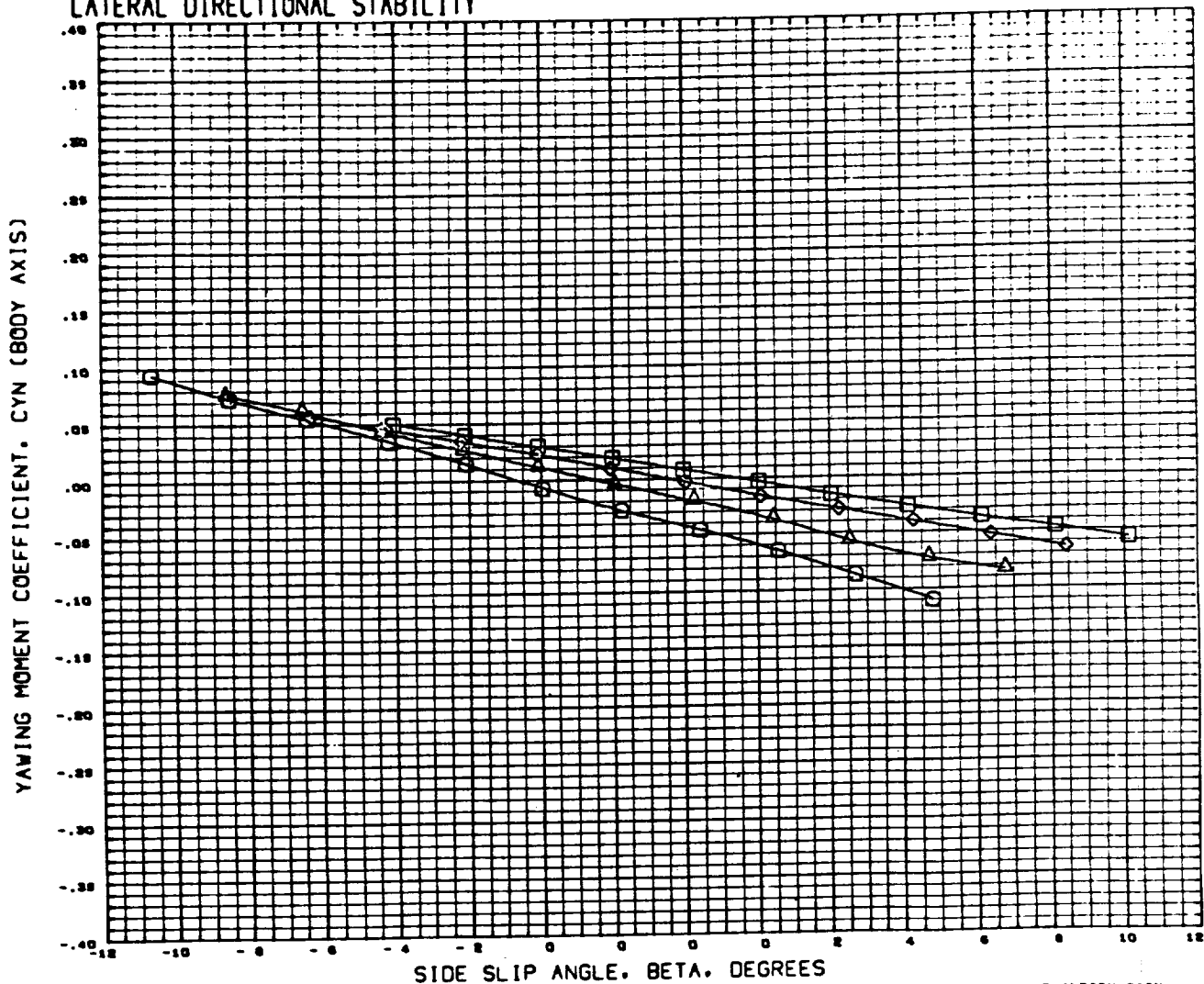


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.197	ALPHA	30.000	DEL	0.000
△	1.955	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000		
□	4.959				

REFERENCE INFORMATION		
BREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA MIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES
○	1.197	ALPHA 30.000 DEL 0.000
△	1.955	DER 0.000 ELEVTR 0.000
◇	3.480	ATLRON 0.000
□	4.959	

REFERENCE INFORMATION		
SREF	7.7005	33. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE #E

M496-MSFC

AR11981-3

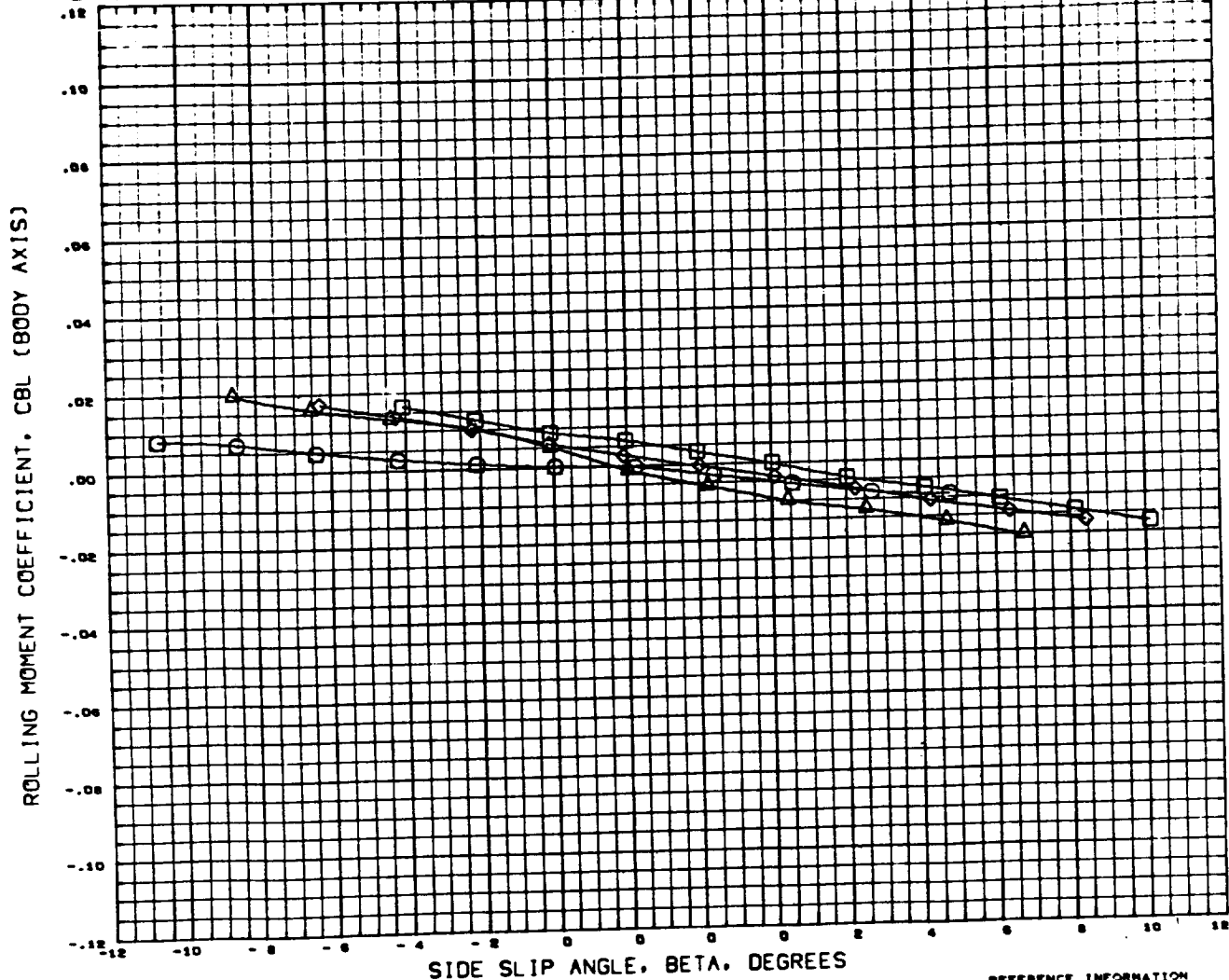
MODEL

W982V1

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LATERAL DIRECTIONAL STABILITY



SYMBOL
○
△
◇
□

MACH
1.197
1.955
3.480
4.959

ALPHA
DER
ATLRON

PARAMETRIC VALUES
30.000
0.000
0.000

DEL
ELEVTR

0.000
0.000

REFERENCE INFORMATION

SREF 7.7003 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE 8E

M496-MSFC

AR11981-3

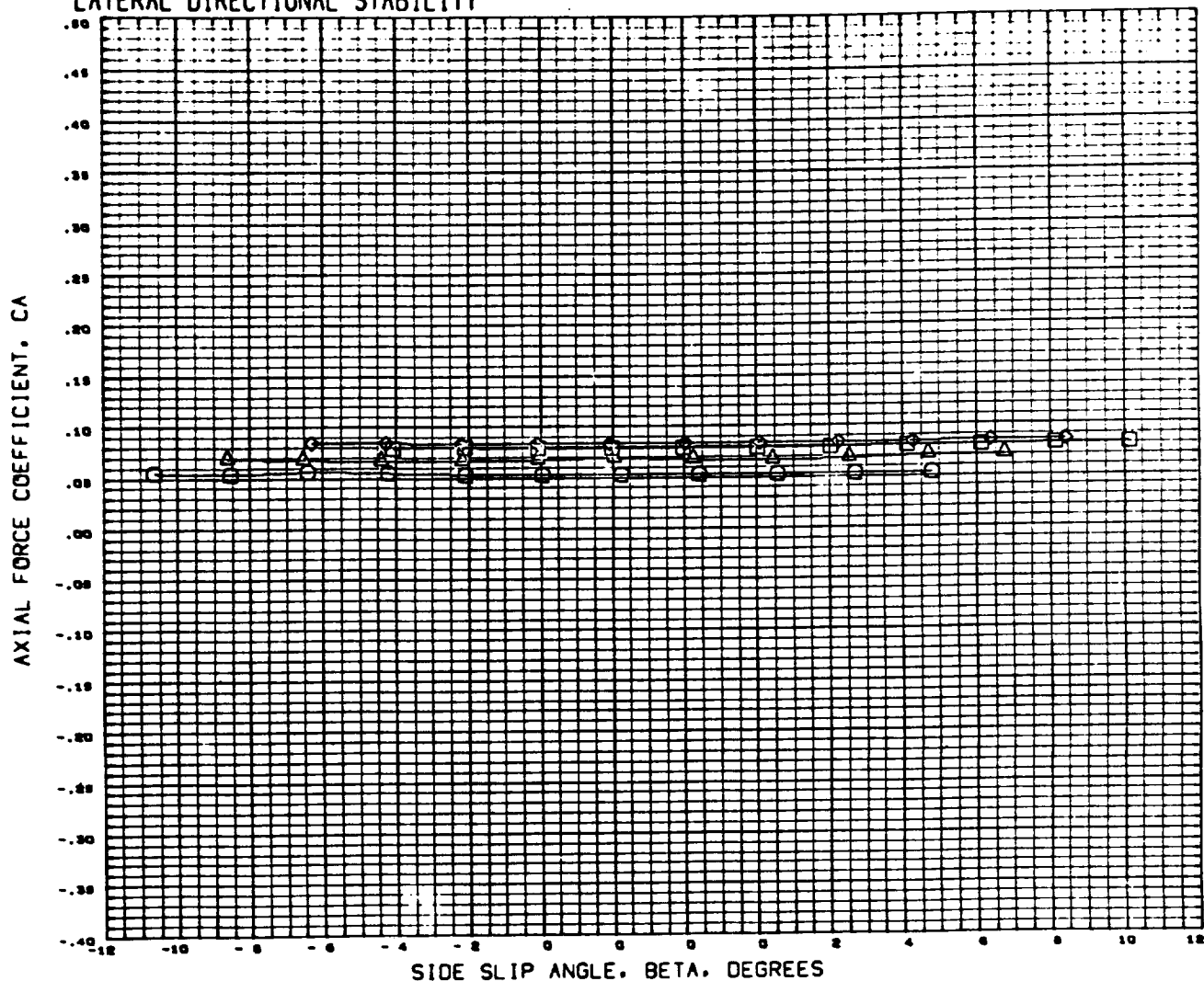
MODEL

W9B2V1

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LATERAL DIRECTIONAL STABILITY

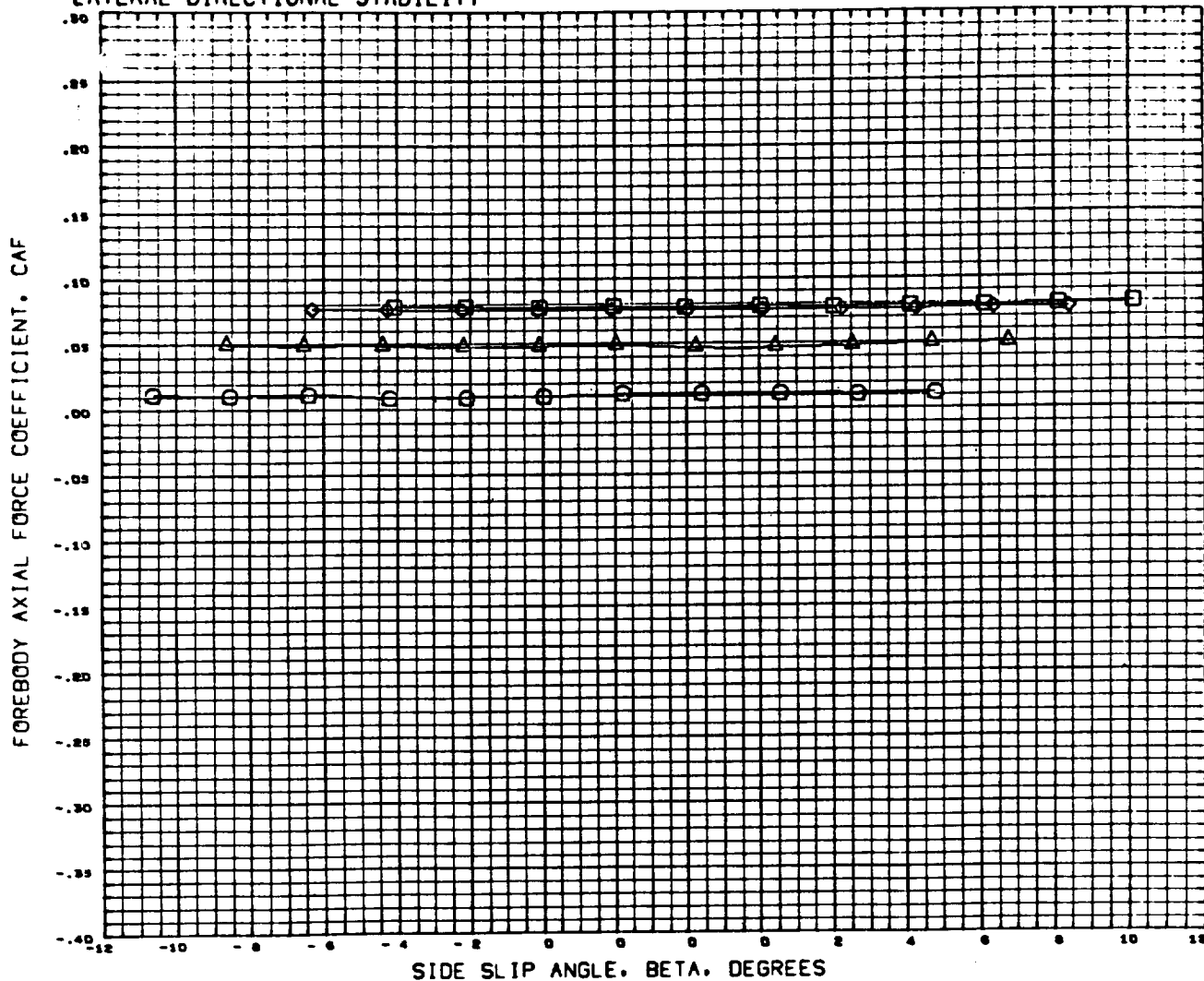


SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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△	1.999	DER 0.000 ELEVTR 0.000	LREF 3.1700 IN.
□	3.480	AILRON 0.000	BREF 4.3920 IN.
◇	4.999		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH		PARAMETRIC VALUES			REFERENCE INFORMATION		
○	1.197	ALPHA	30.000	DEL	0.000	BREF	7.7005	80. IN.
◇	1.955	DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
◊	3.490	ATLRON	0.000			BREF	4.3920	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

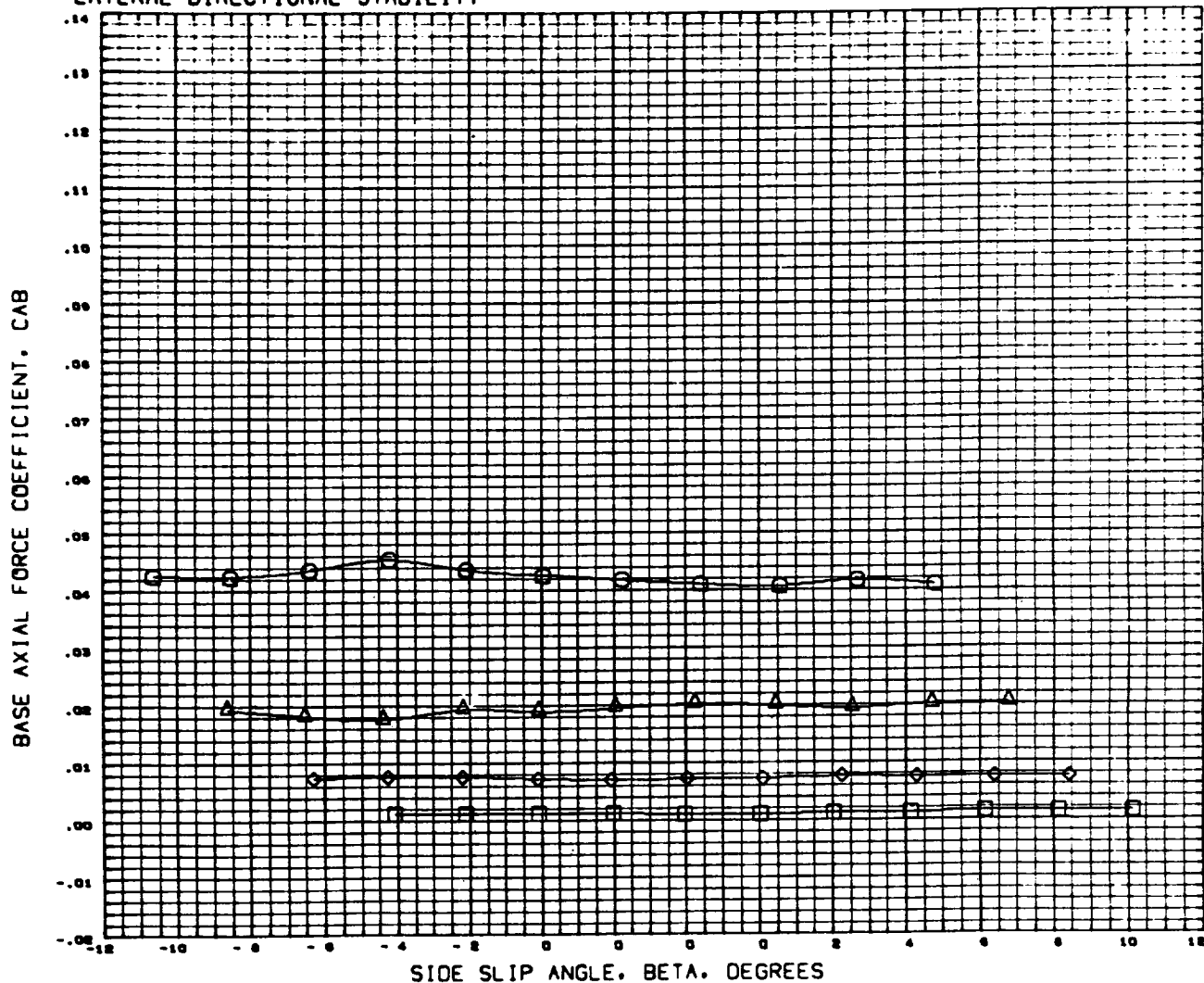
W9B2V1

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LATERAL DIRECTIONAL STABILITY

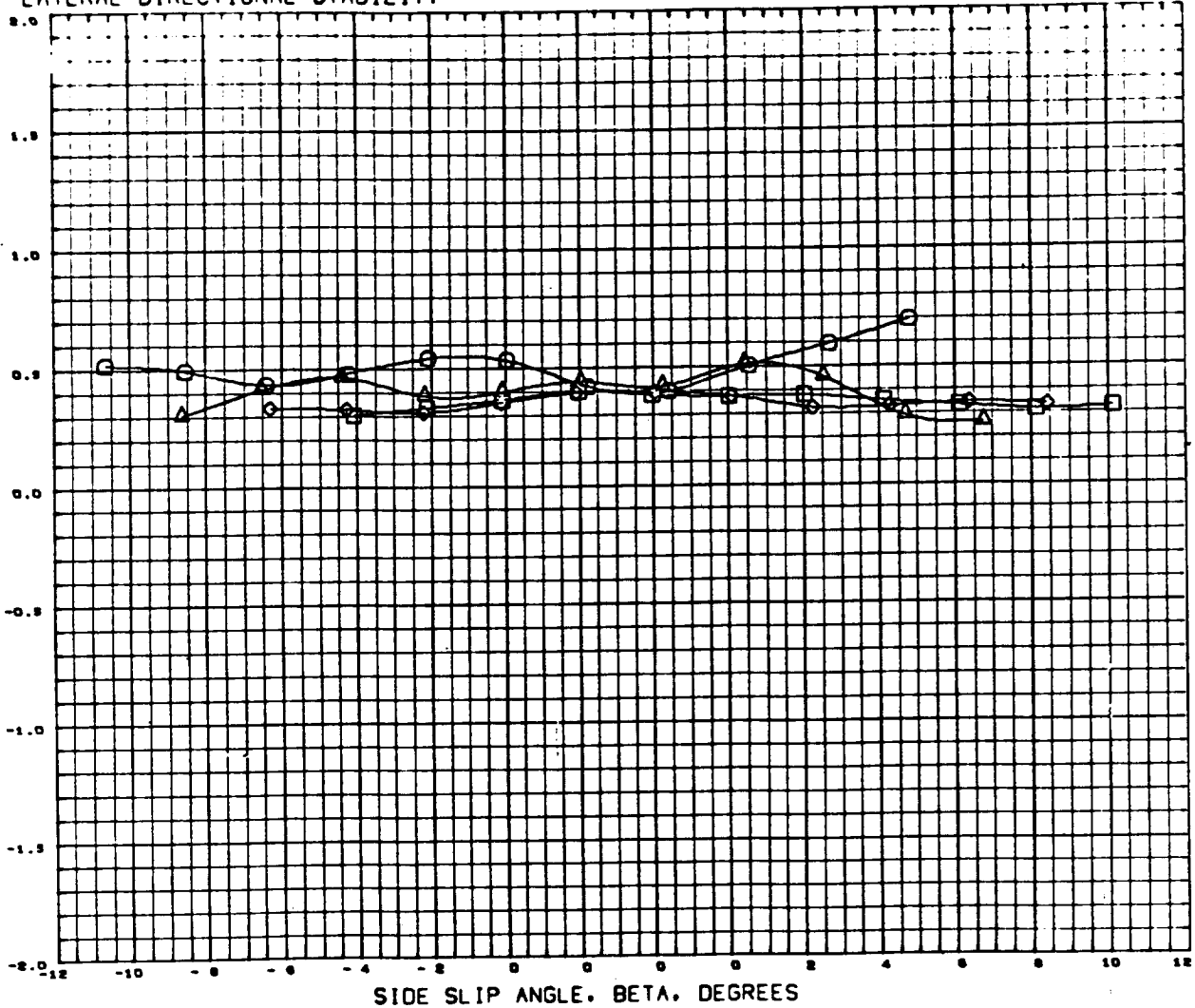


SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	MACH	ALPHA	DEL	ELEVTR	SREF	sq. IN.	
○	1.197	30.000	0.000	0.000	LREF	3.1700	IN.
◇	1.955	0.000	0.000	0.000	BREF	4.3920	IN.
△	3.460	0.000			XMRP	2.4000	IN.
□	4.959				YMRP	0.0000	IN.
					ZMRP	0.0000	IN.
					SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SYMBOL
○
△
◇
□

MACH
1.197
1.955
3.480
4.959

ALPHA
DER
ATLON

PARAMETRIC VALUES
30.000 DEL
0.000 ELEVTR
0.000

0.000
0.000

REFERENCE INFORMATION

SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

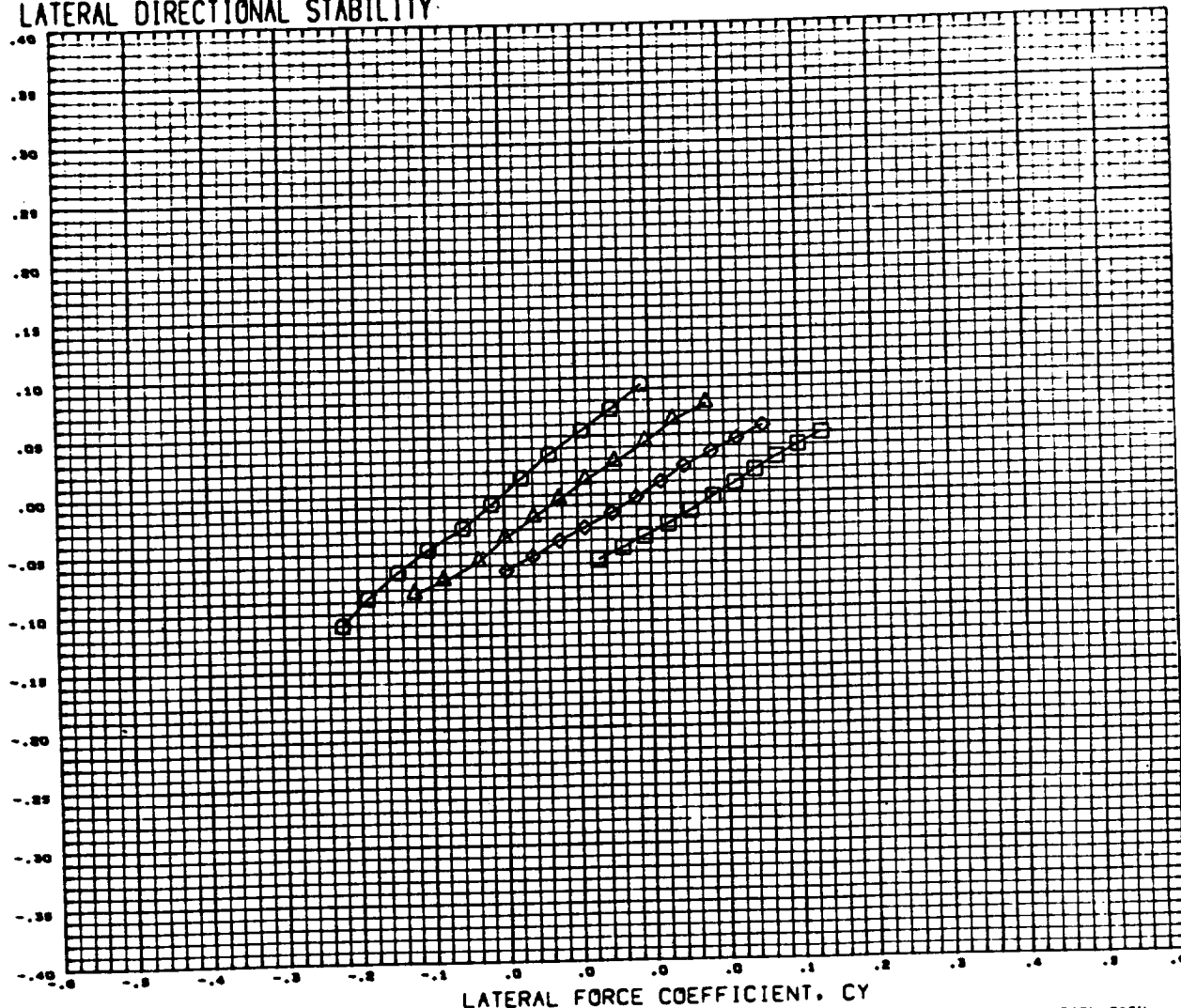
W982V1

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LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL	MACH	PARAMETRIC VALUES
○	1.197	ALPHA 30.000 DEL 0.000
△	1.993	DER 0.000 ELEVTR 0.000
◇	3.489	AILROM 0.000
□	4.939	

REFERENCE INFORMATION		
SREF	7.7005	sq. in.
LREF	3.1700	in.
BREF	4.3920	in.
ZMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE 0E

M496-MSFC

AR11981-3

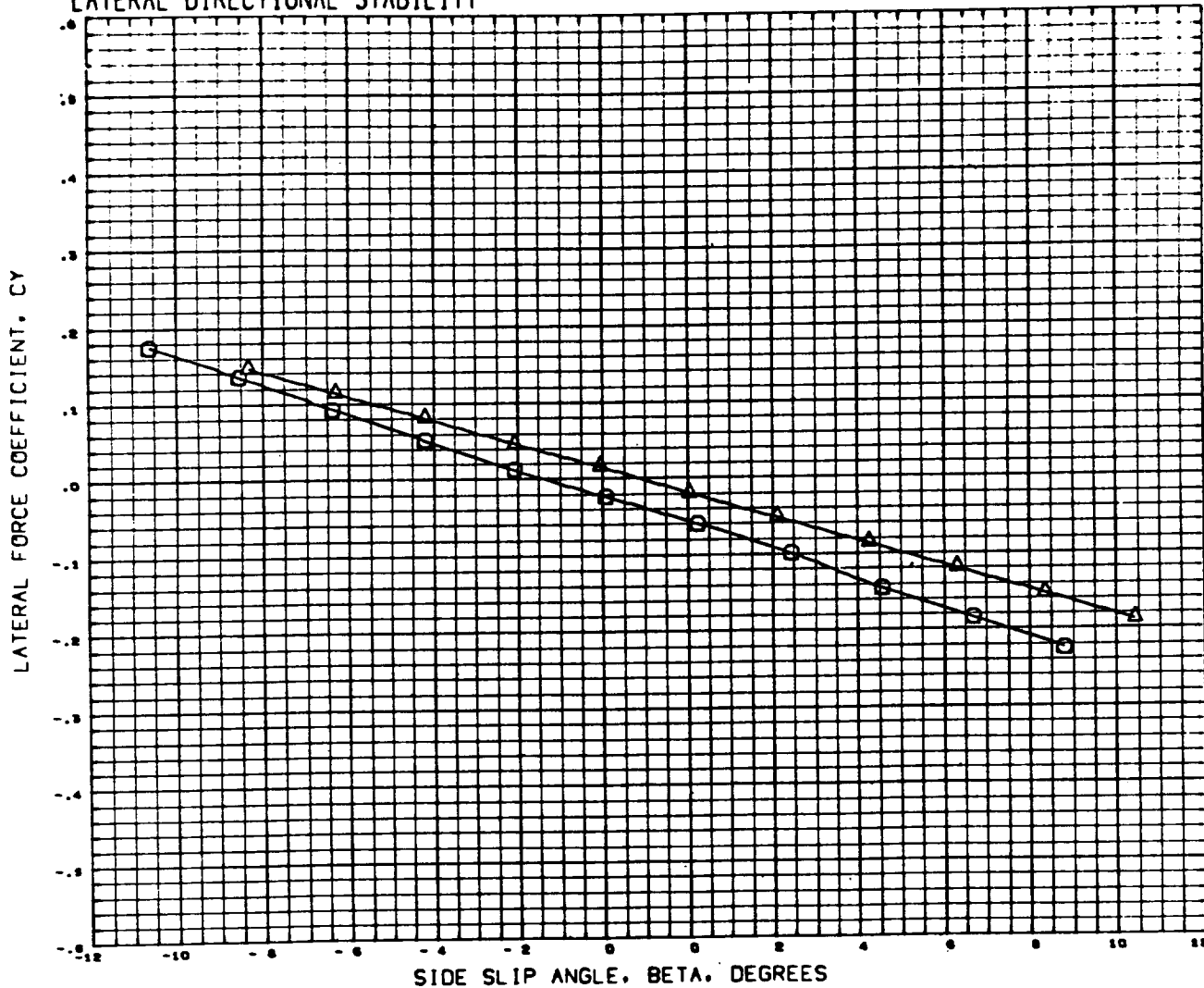
MODEL

W9B2V1

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LATERAL DIRECTIONAL STABILITY

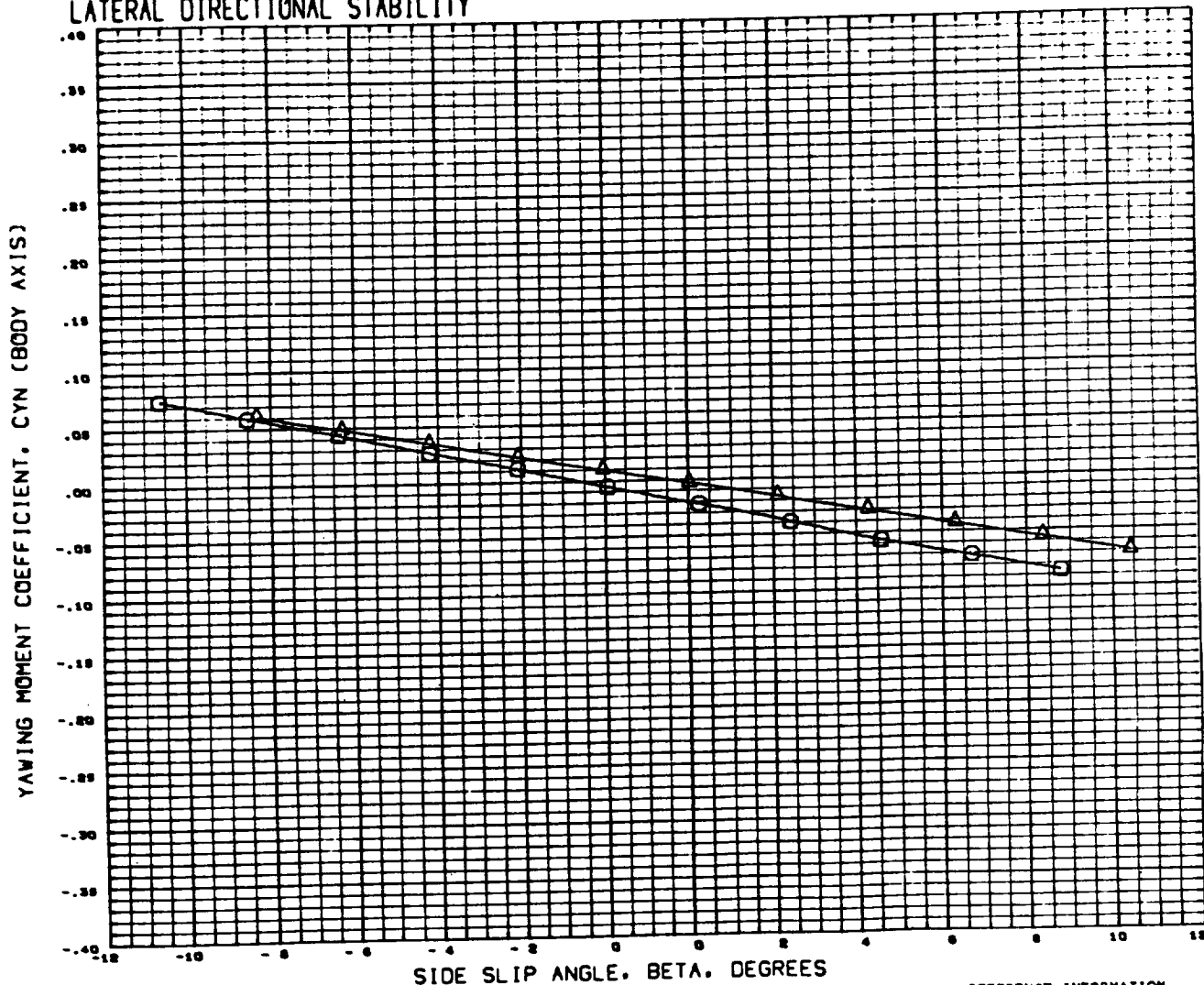


SYMBOL ○ △	MACH	PARAMETRIC VALUES			
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	3.480	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
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LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL ○	MACH	PARAMETRIC VALUES			
	1.954	ALPHA	30.000	DEL	0.000
	3.460	DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREF	7.7005	SG. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
YNRP	2.4000	IN.
YNRP	0.0000	IN.
ZNRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

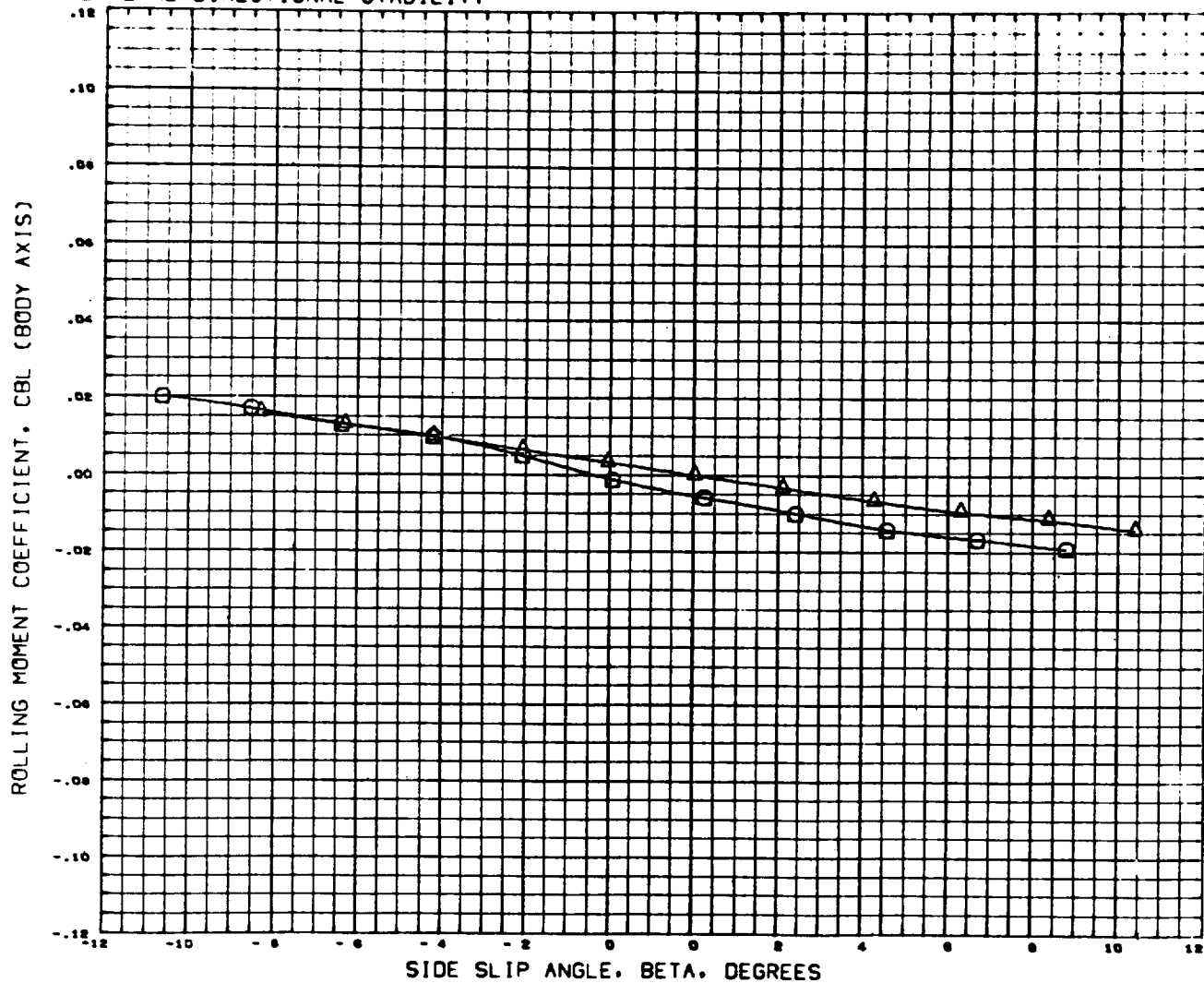
MODEL

W982

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LATERAL DIRECTIONAL STABILITY

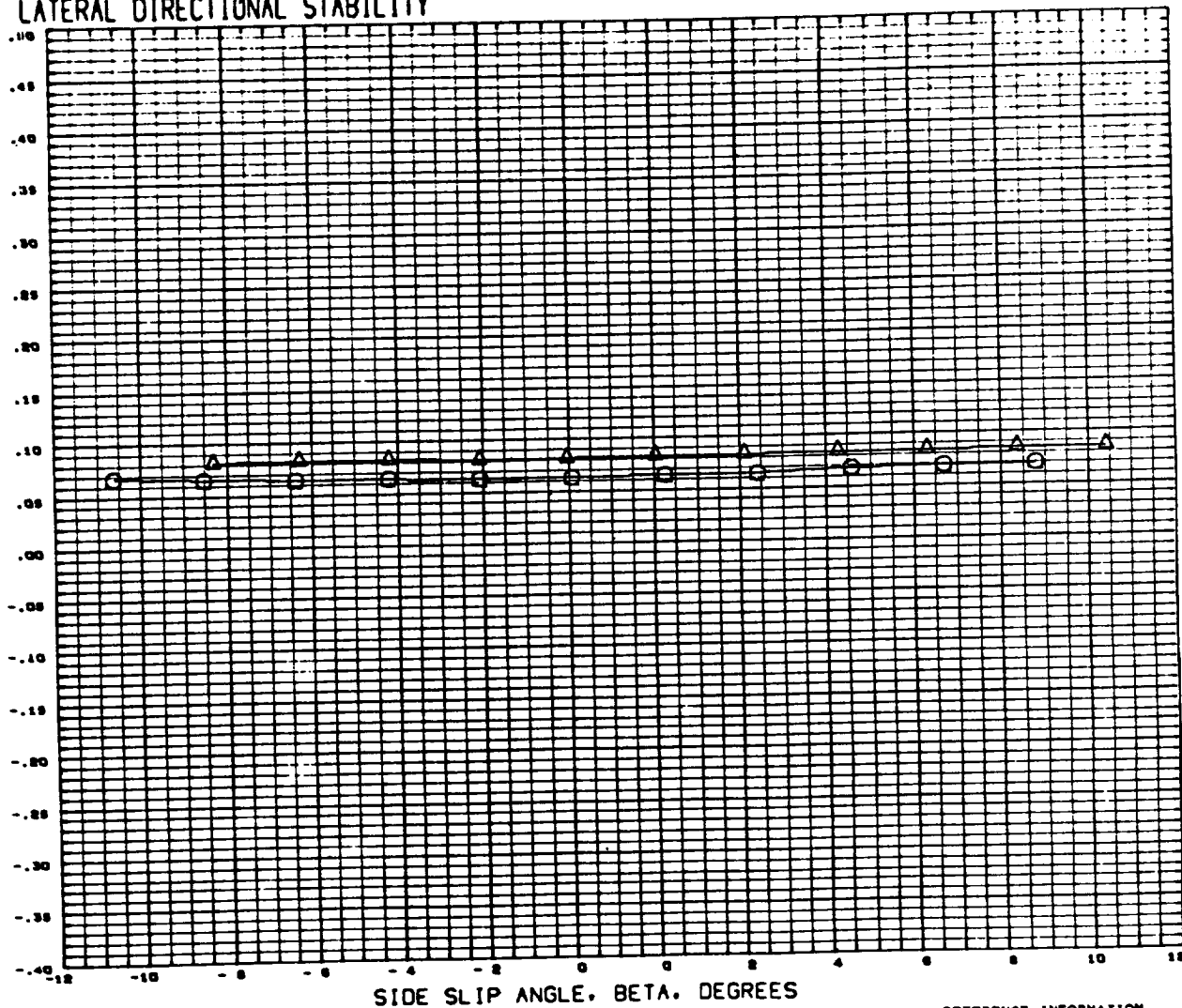


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	1.954	ALPHA	30.000	DEL	0.000	SRP	7.7005
△	3.460	DER	0.000	ELEVTR	0.000	LRP	3.1700
		AILRON	0.000			SRP	4.3920
						YMRP	2.4000
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

AXIAL FORCE COEFFICIENT, CA



SYMBOL 	MACH	PARAMETRIC VALUES			
	1.934	ALPHA	30.000	DEL	0.000
	3.480	DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
SREP	7.7003	50.1N.
LREP	3.1700	1N.
QREP	4.3920	1N.
XMRP	2.4000	1N.
YMRP	0.0000	1N.
ZMRP	0.0000	1N.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

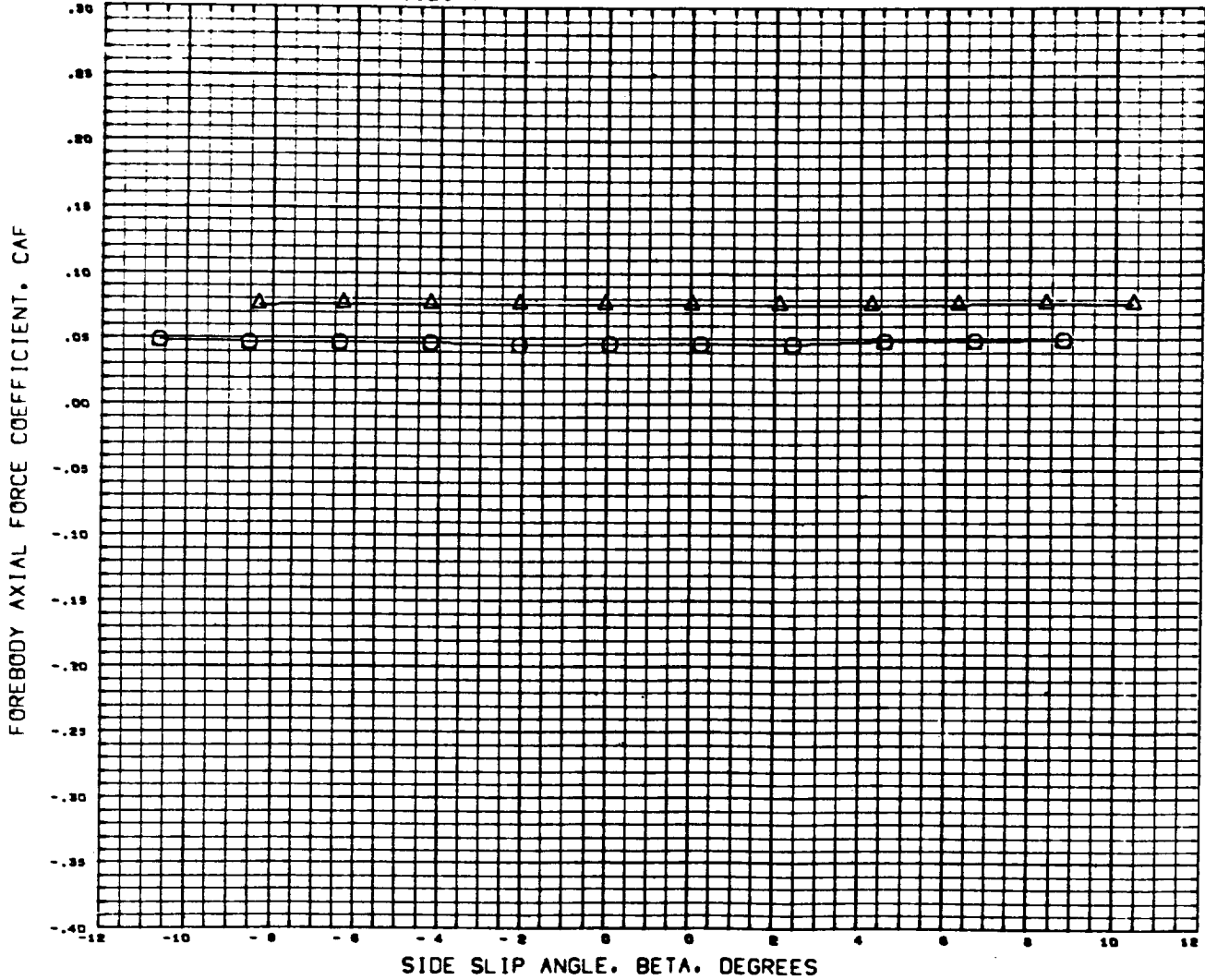
MODEL

W982

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LATERAL DIRECTIONAL STABILITY



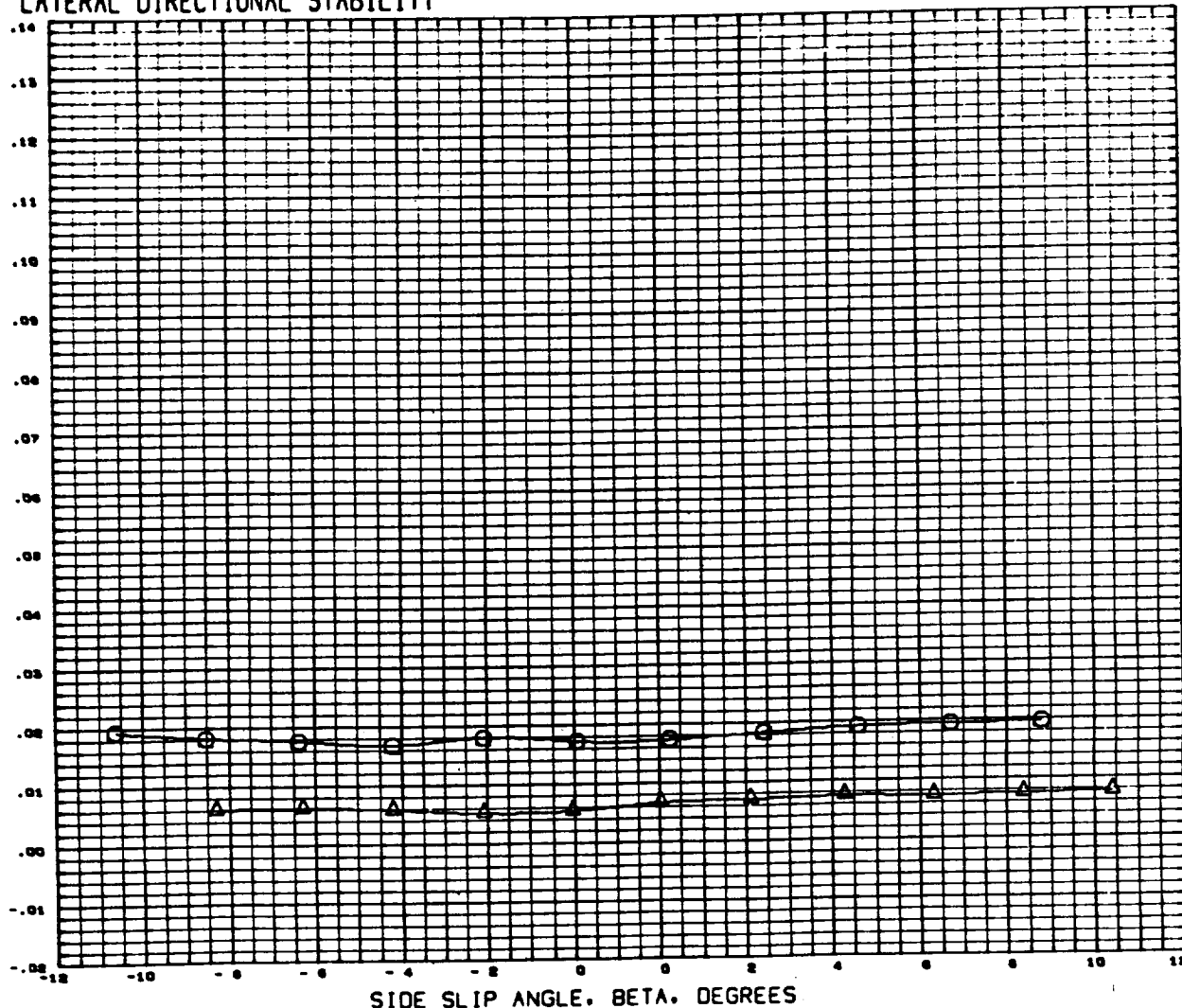
SYMBOL 	MACH	PARAMETRIC VALUES			
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	3.480	DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREF	7.7003	80. IN.
LREF	3.1700	IN.
BREF	4.3820	IN.
ZHRP	8.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB

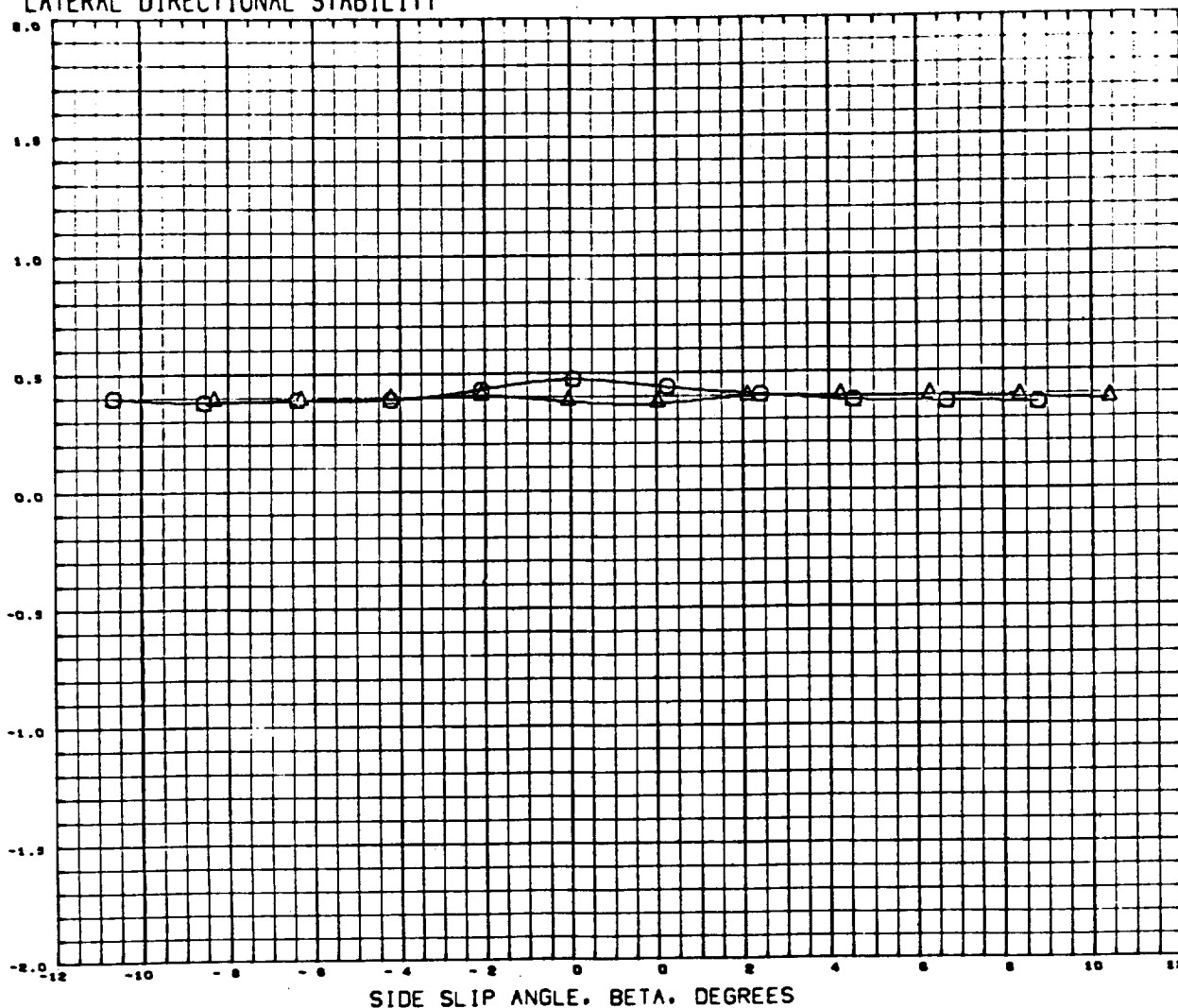


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	SCALE	SREF	LREF	BREF
○	1.954	30.000	0.000	0.000		7.7005	3.1700	4.3920
△	3.480	0.000	0.000	0.000		2.4000	0.0000	0.0000
		AILRON	0.000			0.0025		

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/CCY

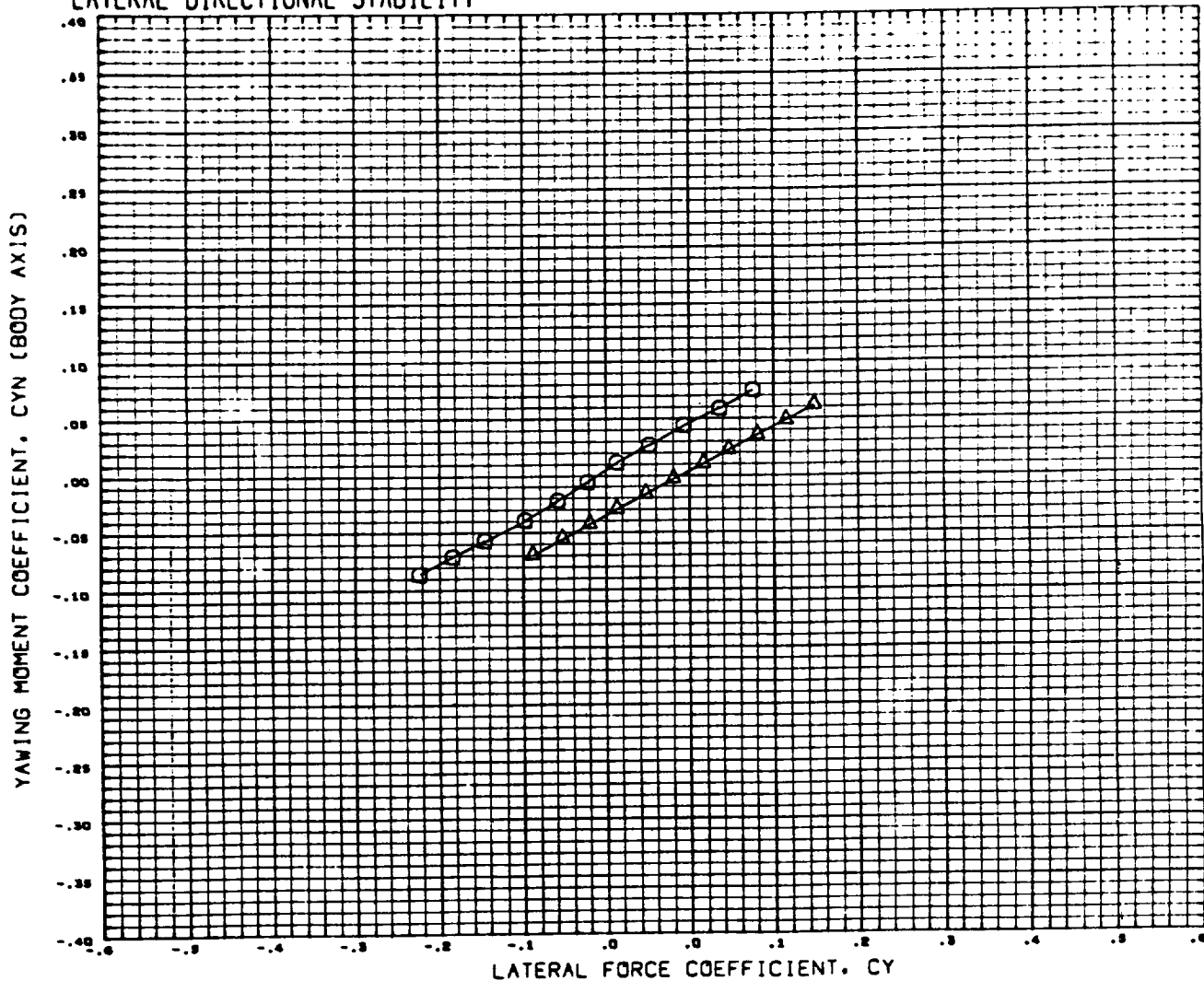


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.954	ALPHA	30.000	DEL	0.000
△	3.480	DER	0.000	ELEVTR	0.000
		ATLON	0.000		

REFERENCE INFORMATION		
BREF	7.7005	sq. in.
LREF	3.1700	in.
SRF	4.3920	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES
○	1.934	ALPHA 30.000 DEL 0.000
△	3.460	DER 0.000 ELEVTR 0.000
		AILRON 0.000

REFERENCE INFORMATION		
SREP	7.7005	SQ. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

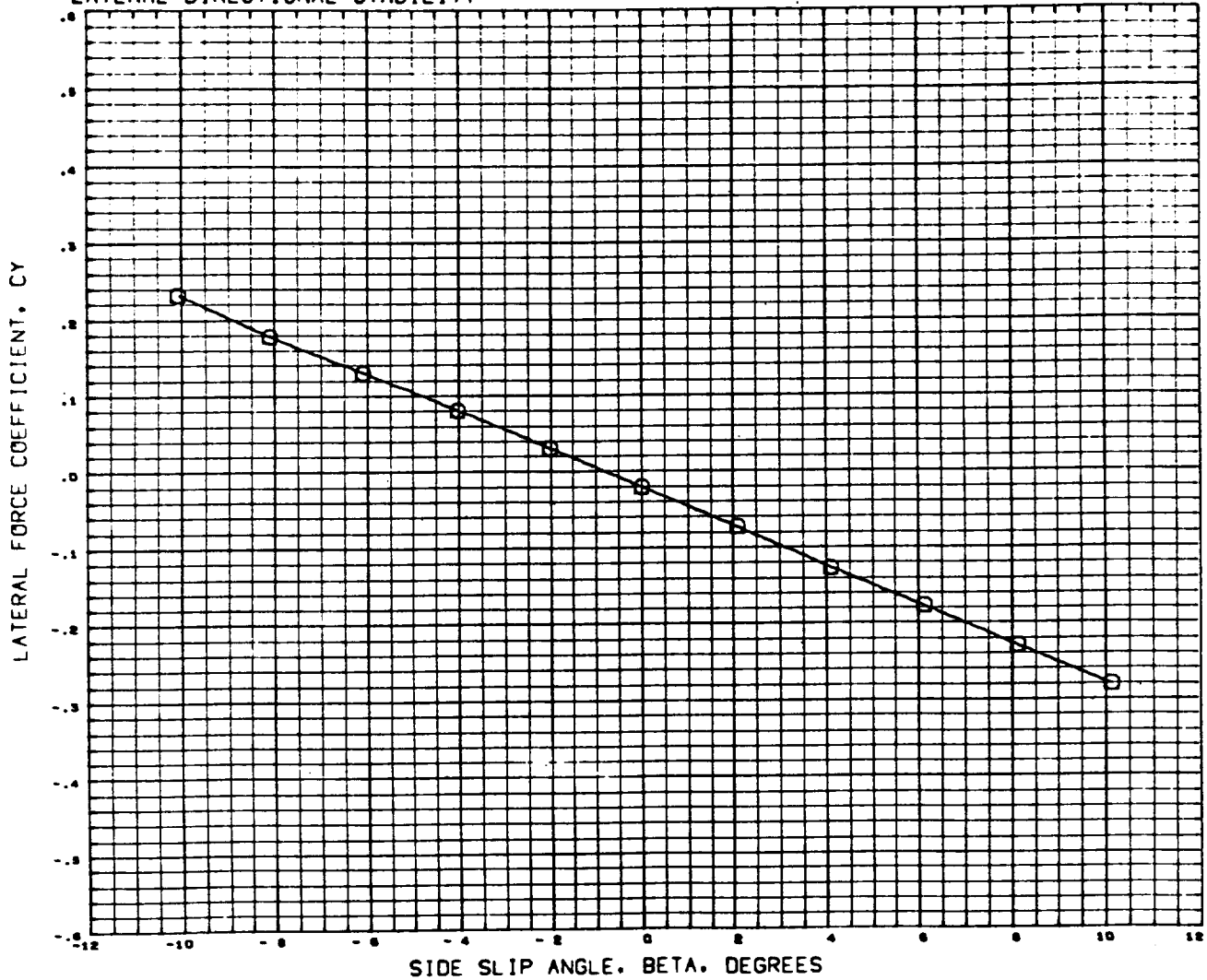
MODEL

W9B2

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LATERAL DIRECTIONAL STABILITY

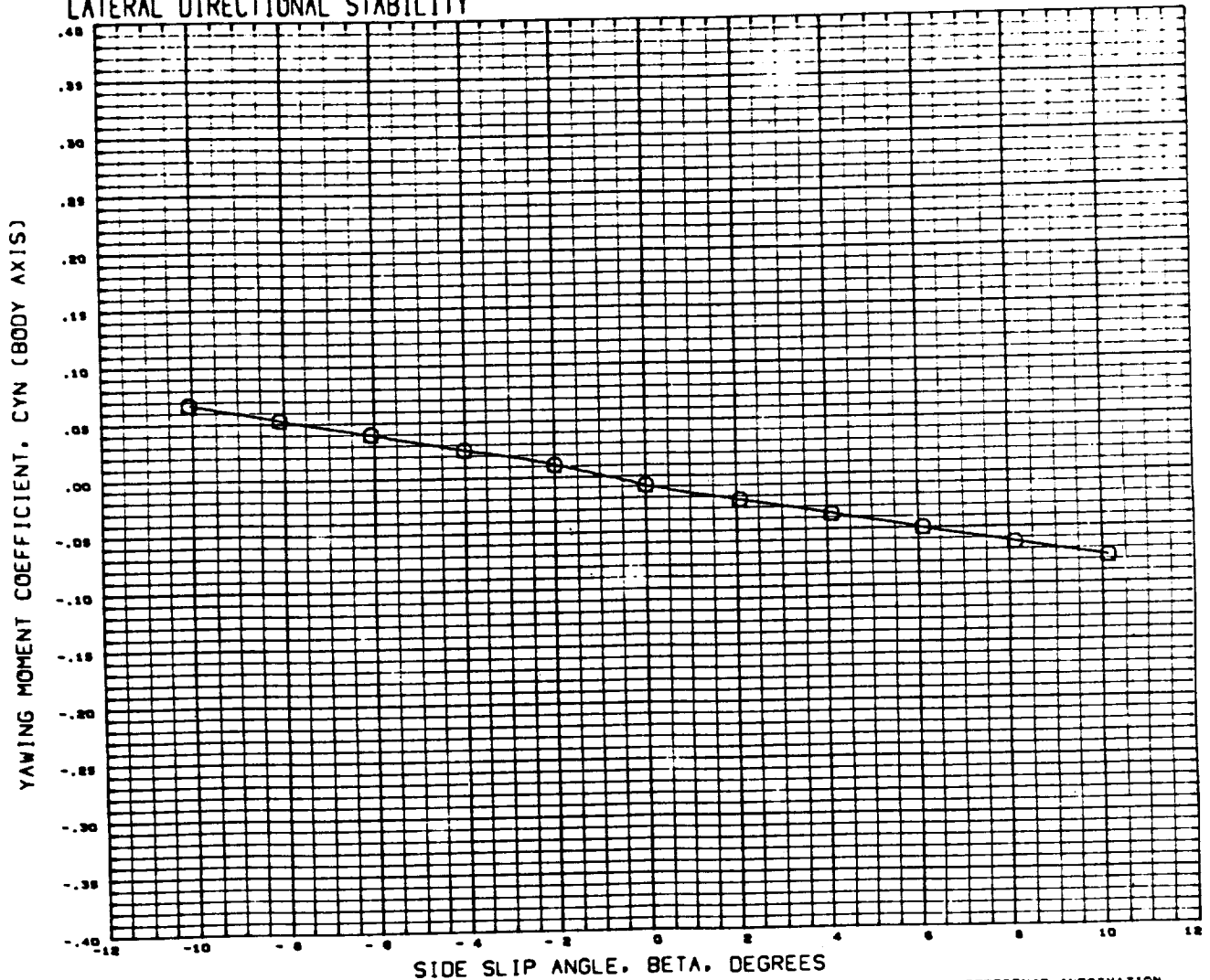


SYMBOL \bigcirc MACH 4.959
 PARAMETRIC VALUES
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.8980 IN.
 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 4.959
 PARAMETRIC VALUES
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.8980 IN.
 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

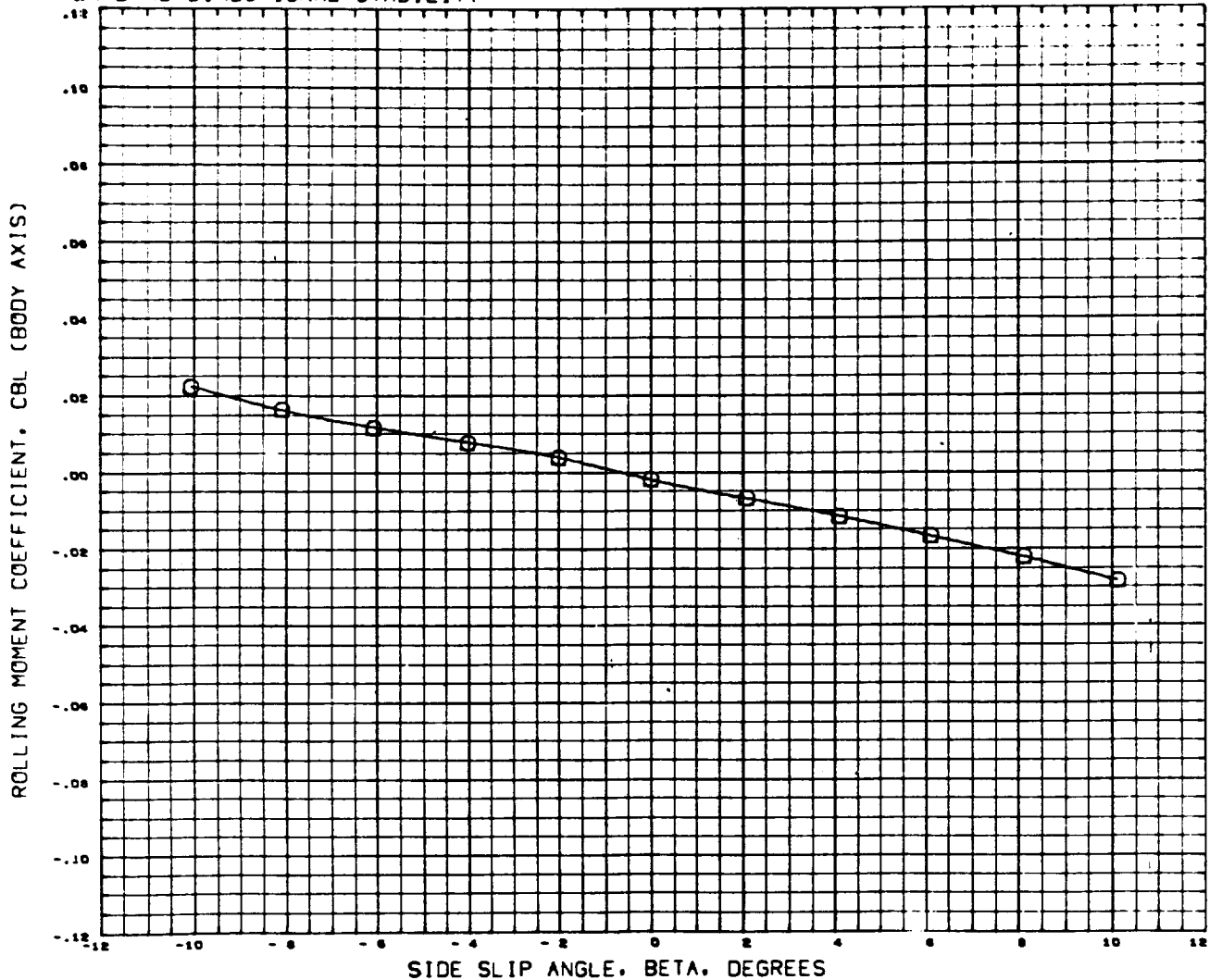
MODEL

W482V2

(E38281) 06 SEP 72

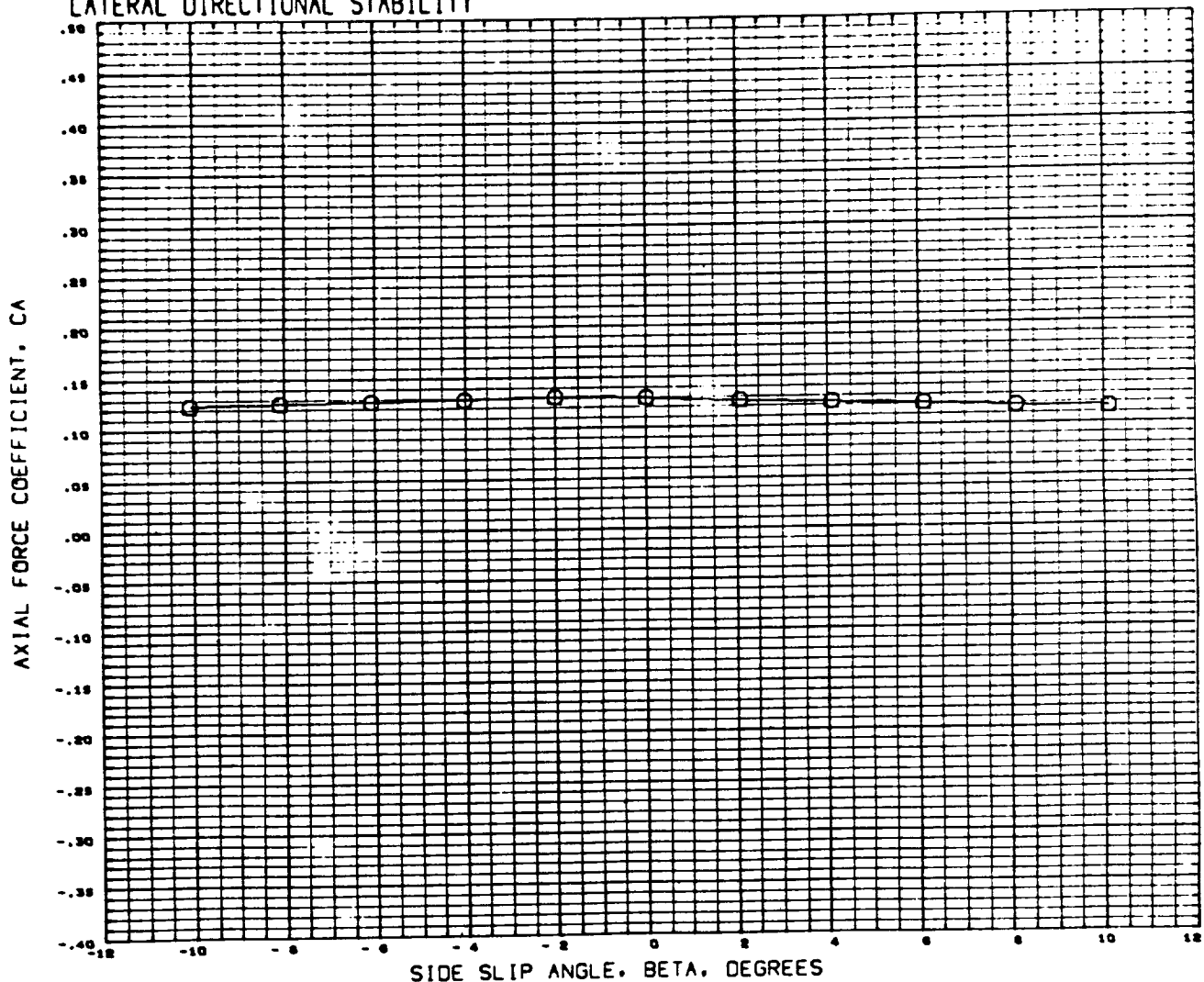
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LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES		REFERENCE INFORMATION	
O		4.959		ALPHA	30.000	DEL	0.000
				DER	0.000	ELEVTR	0.000
				AILRON	0.000		
				DATA HIST. CODE		*E	
				SREF	4.9327	80. IN.	
				LRFP	1.6980	IN.	
				BRFP	3.7200	IN.	
				XMRP	2.4000	IN.	
				YMRP	0.0000	IN.	
				ZMRP	0.0000	IN.	
				SCALE	0.0025		

LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 4.950
 PARAMETRIC VALUES
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.6980 IN.
 BREF 3.7203 IN.
 XMRP 2.4000 IN.
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 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

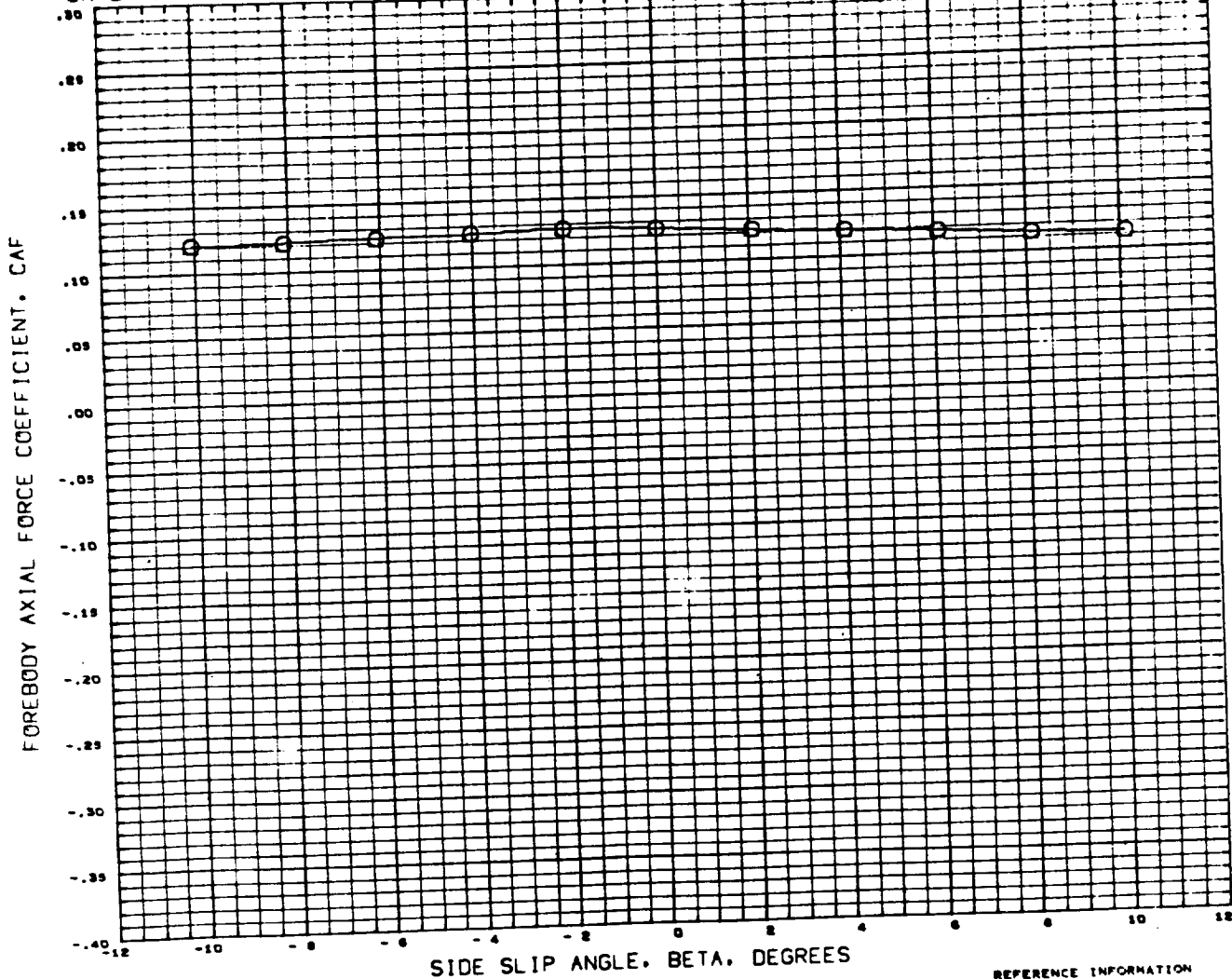
W482V2

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LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 4.959
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.6980 IN.
 SREF 3.7200 IN.
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 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 4E

M496-MSFC

AR11981-3

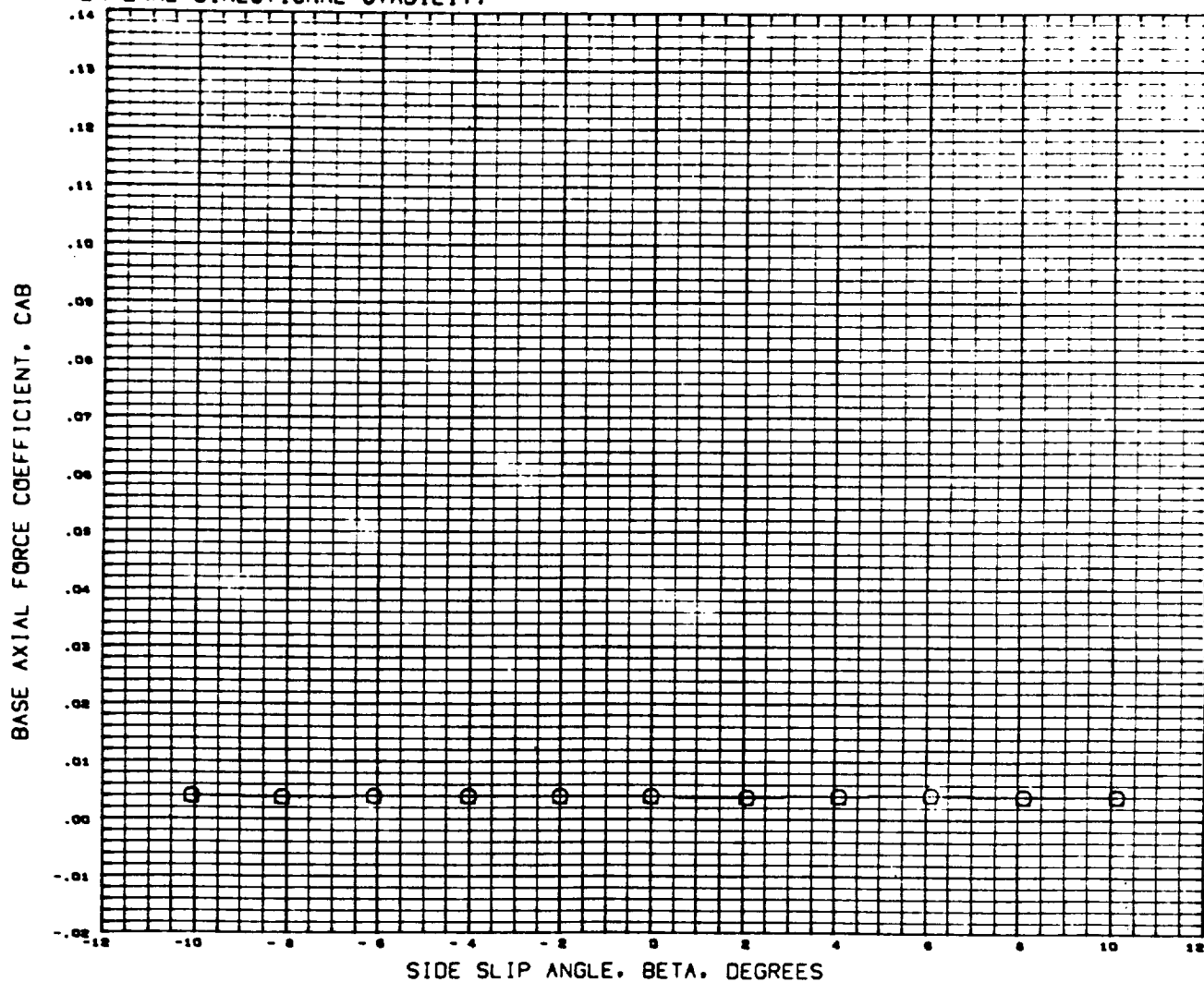
MODEL

W482V2

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LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.939	ALPHA	30.000	DEL	0.000	SREF	4.9327	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
		AILRON	0.000			BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
○	4.959	ALPHA	30.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000		

REFERENCE INFORMATION		
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LREF	1.6960	IN.
QREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
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SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W4B2V2

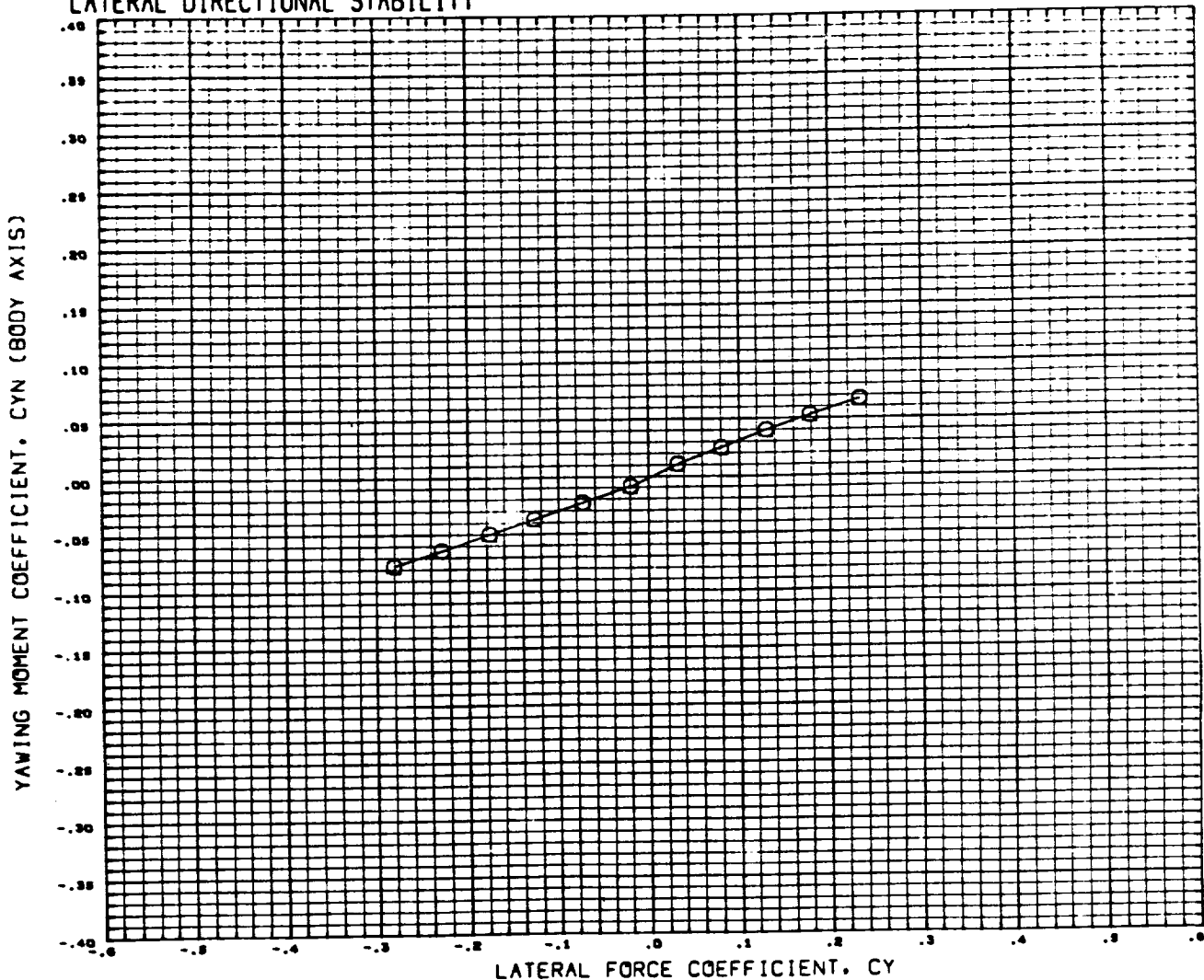
(E38281)

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LATERAL DIRECTIONAL STABILITY

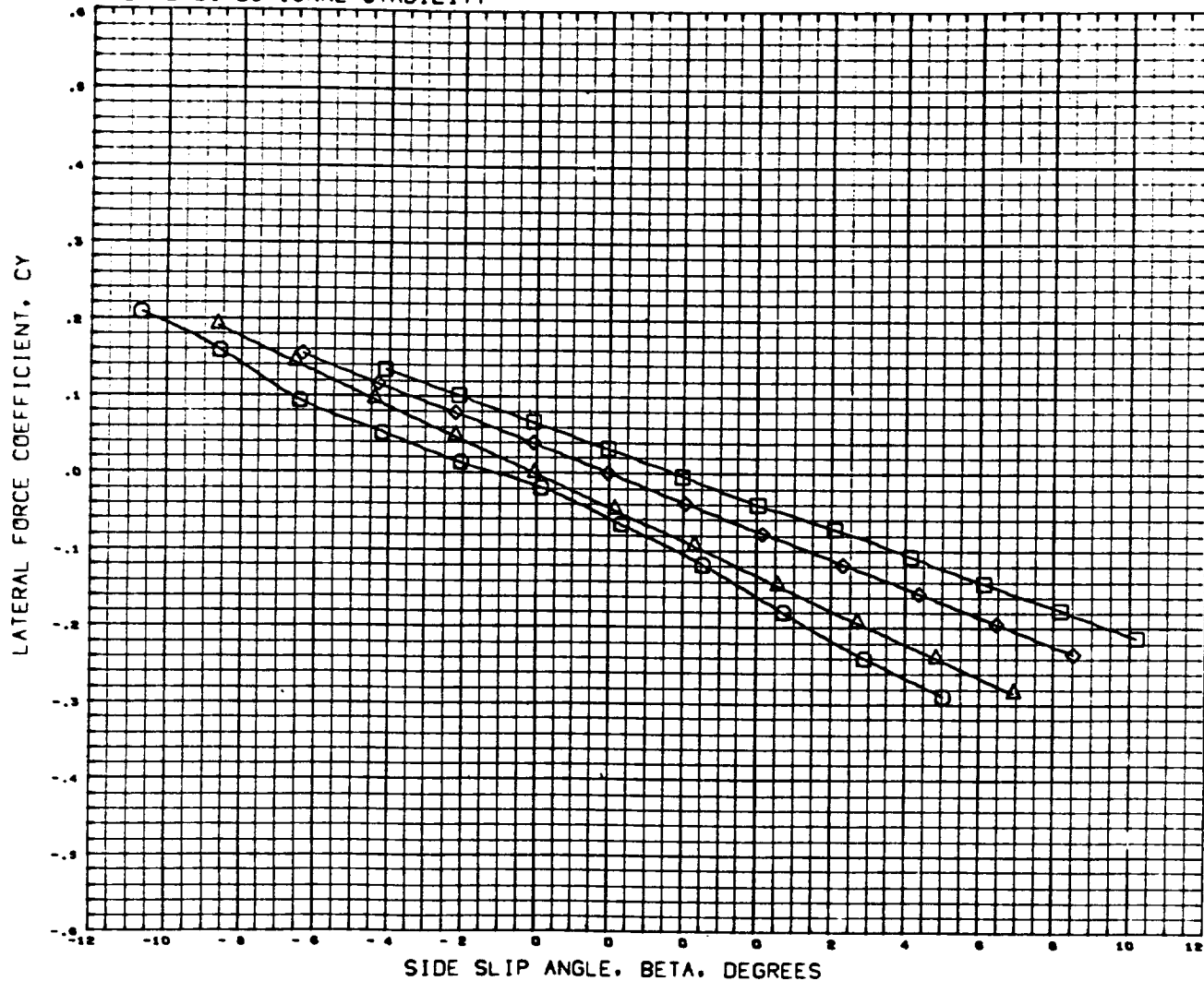


SYMBOL	MACH	PARAMETRIC VALUES			
○	4.950	ALPHA	30.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATTROH	0.000		

REFERENCE INFORMATION		
SREP	4.9327	30. IN.
LREP	1.8960	IN.
BREP	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

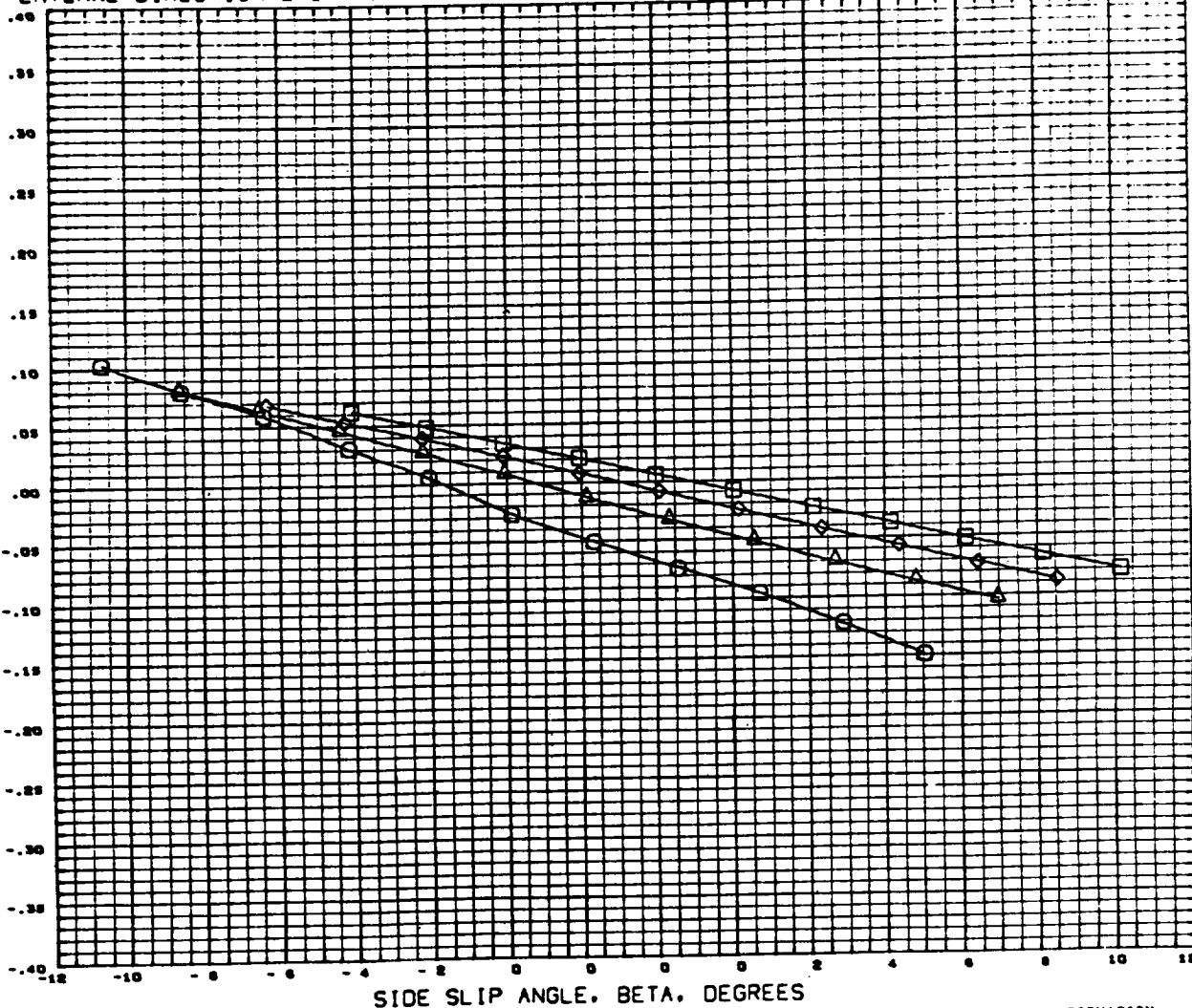


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
\bigcirc	1.194	ALPHA	50.000	DEL	0.000	SREF	7.7005	sq. in.
\triangle	1.954	DER	0.000	ELEVTR	0.000	LREF	3.1700	in.
\diamond	3.480	ATLRON	0.000			BREF	4.3820	in.
\square	4.939					XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

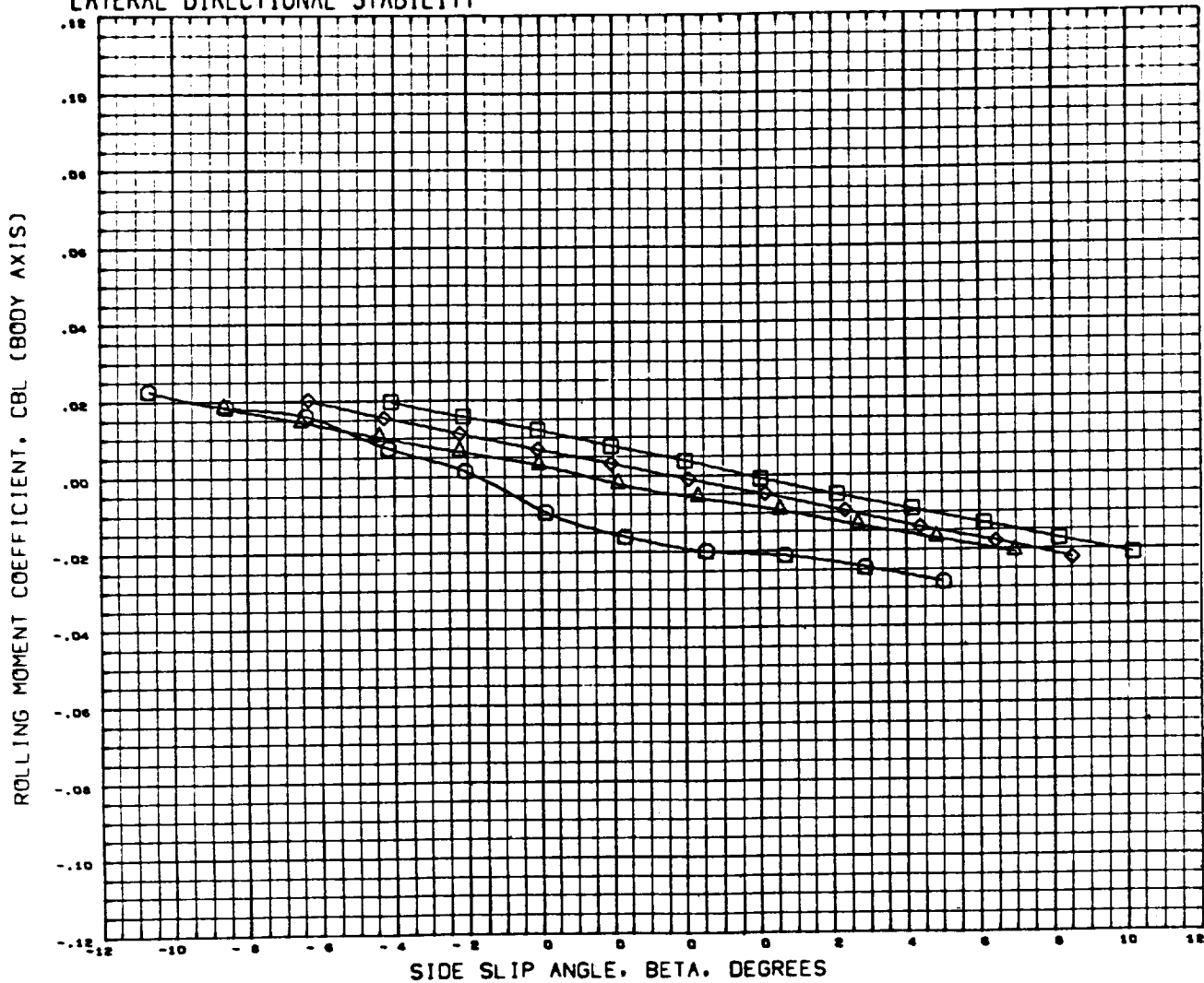
YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR		SREP		SO.IN.
○	1.194	50.000	0.000	0.000		LREP	3.1700	IN.
◇	1.994	0.000	0.000	0.000		BREP	4.3920	IN.
◇	3.480	0.000				XHRP	2.4000	IN.
□	4.959					YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES
○	1.194	ALPHA 90.000 DEL 0.000
△	1.934	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000
□	4.959	

REFERENCE INFORMATION		
SREF	7.7003	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

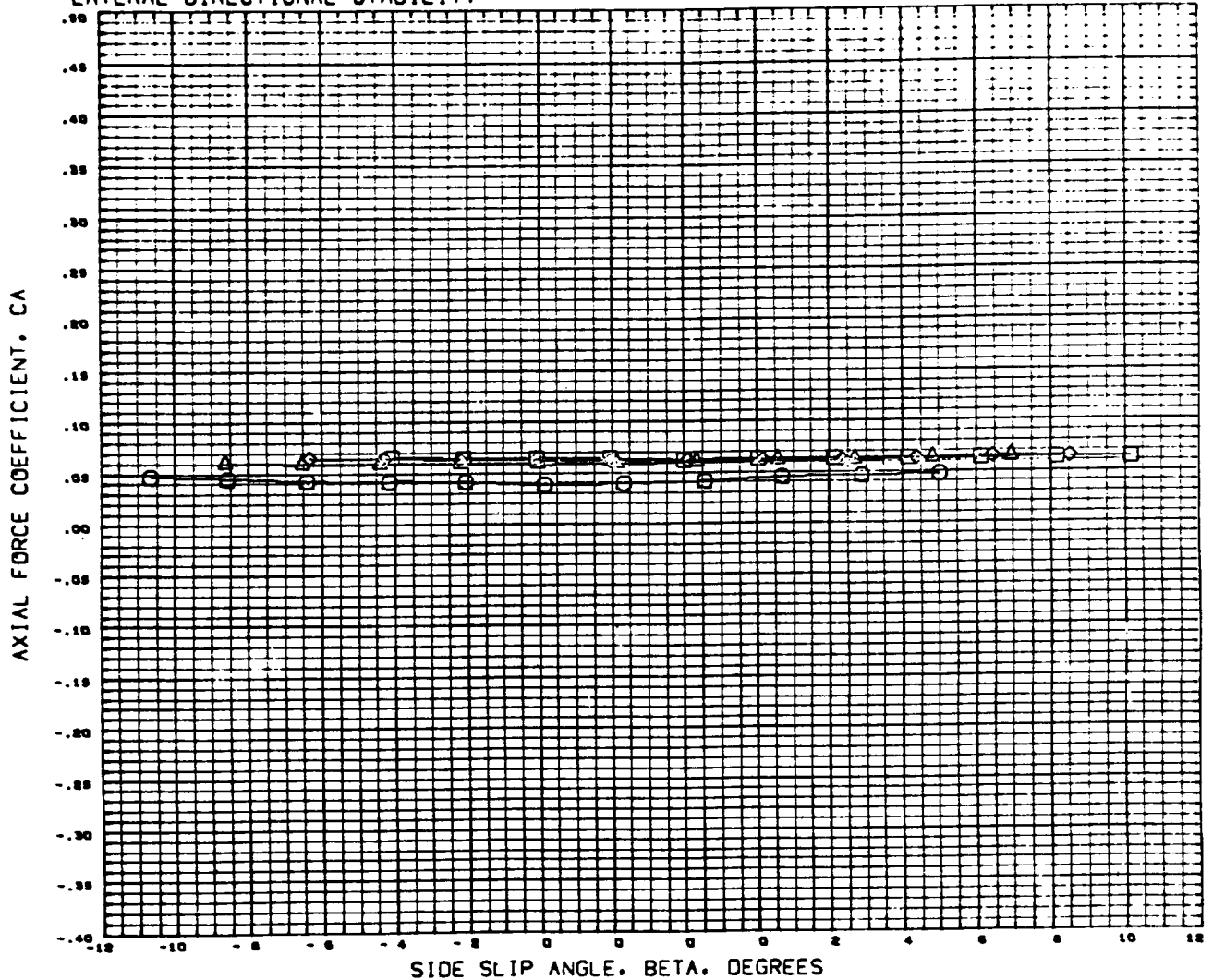
MODEL

W9B2V1

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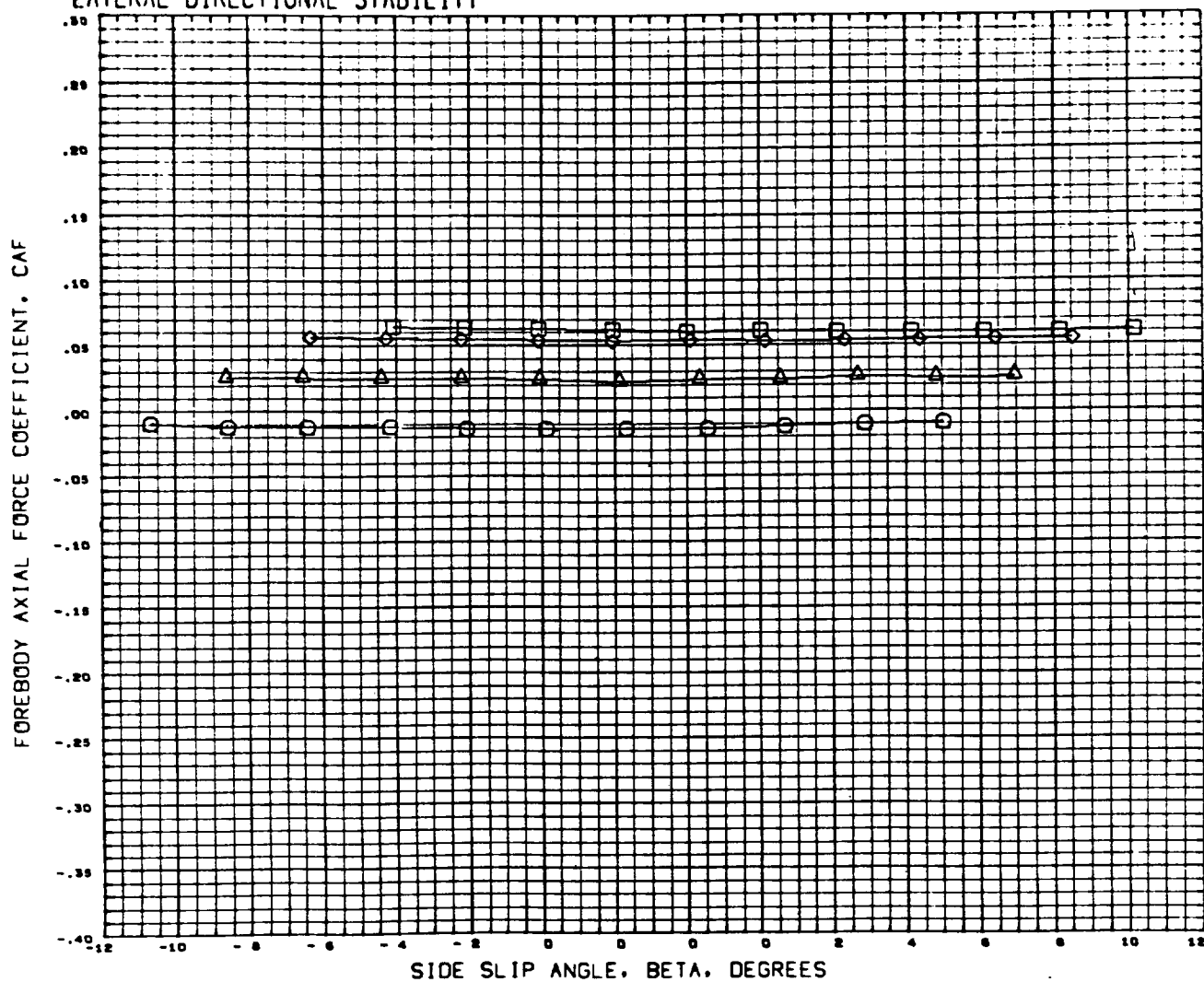
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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△	1.994	DER 0.000 ELEVTR 0.000	LREF 3.1700 1N.
◇	3.480	ATLRON 0.000	BREF 4.3920 1N.
□	4.939		YHRP 2.4000 1N.
			ZHRP 0.0000 1N.
			SCALE 0.0025

DATA HIST. CODE *E

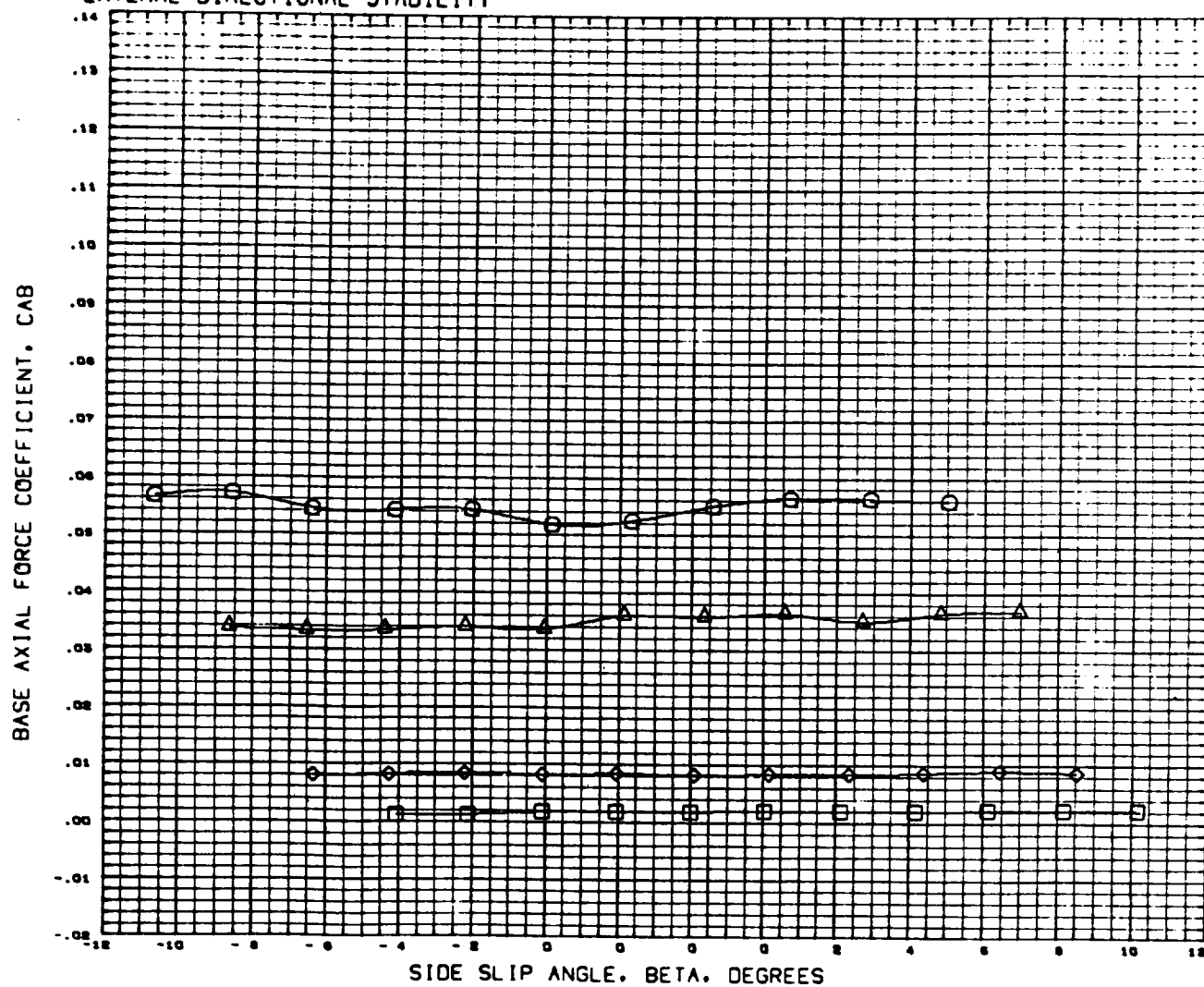
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	SCALE	REF	IN.
○	1.194	50.000	0.000	0.000	0.0005	7.7005	50. IN.
△	1.954	0.000	0.000	0.000	0.0005	3.1700	IN.
◇	3.480	0.000	0.000	0.000	0.0005	4.3920	IN.
□	4.959	0.000	0.000	0.000	0.0005	2.4000	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.194	ALPHA 50.000 DEL 0.000	SREF 7.7005 50. IN.
△	1.934	DER 0.000 ELEVTR 0.000	LREF 3.1700 IN.
◇	3.400	AILRON 0.000	BREF 4.3920 IN.
□	4.939		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W982V1

(E3823J)

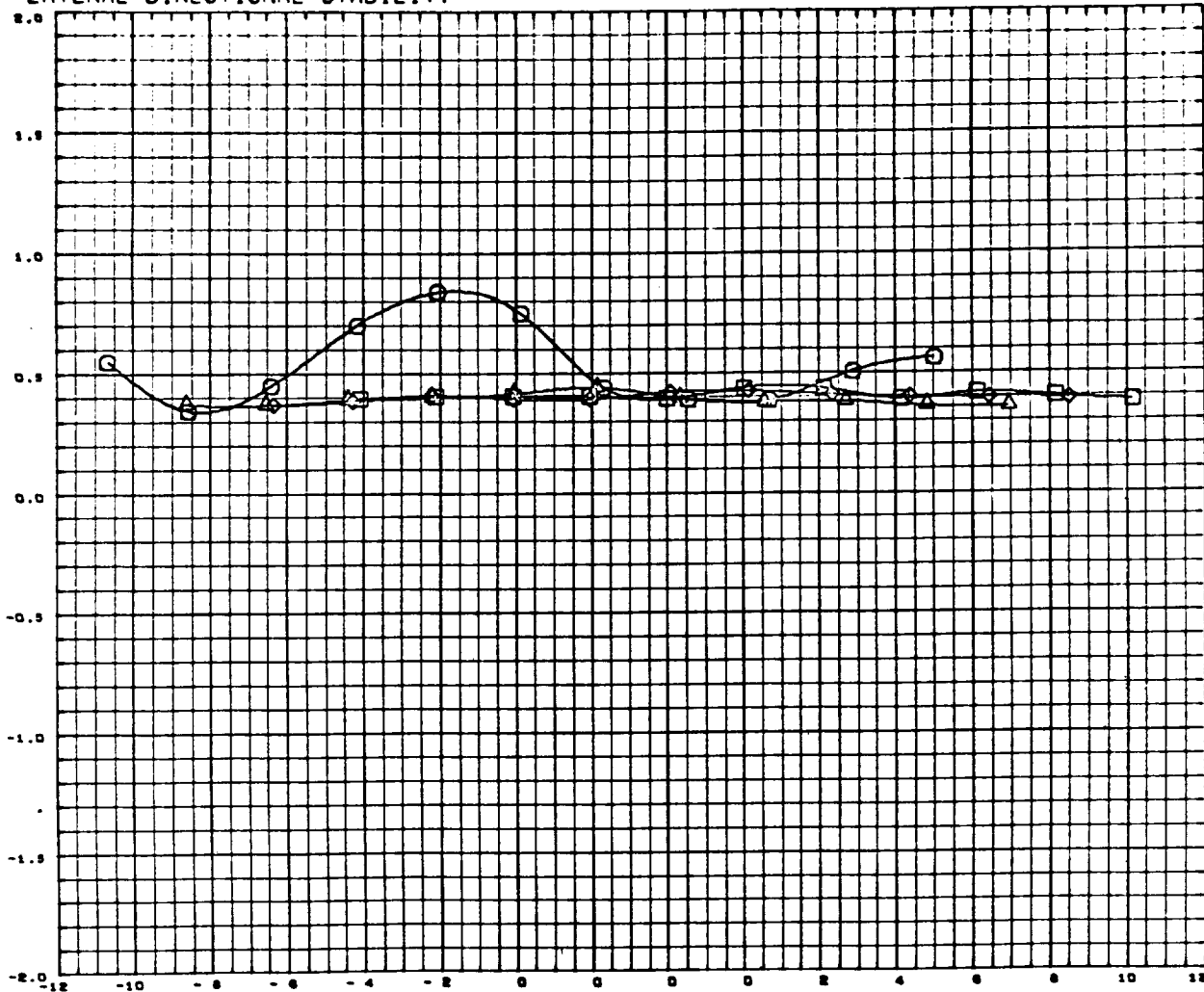
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LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY

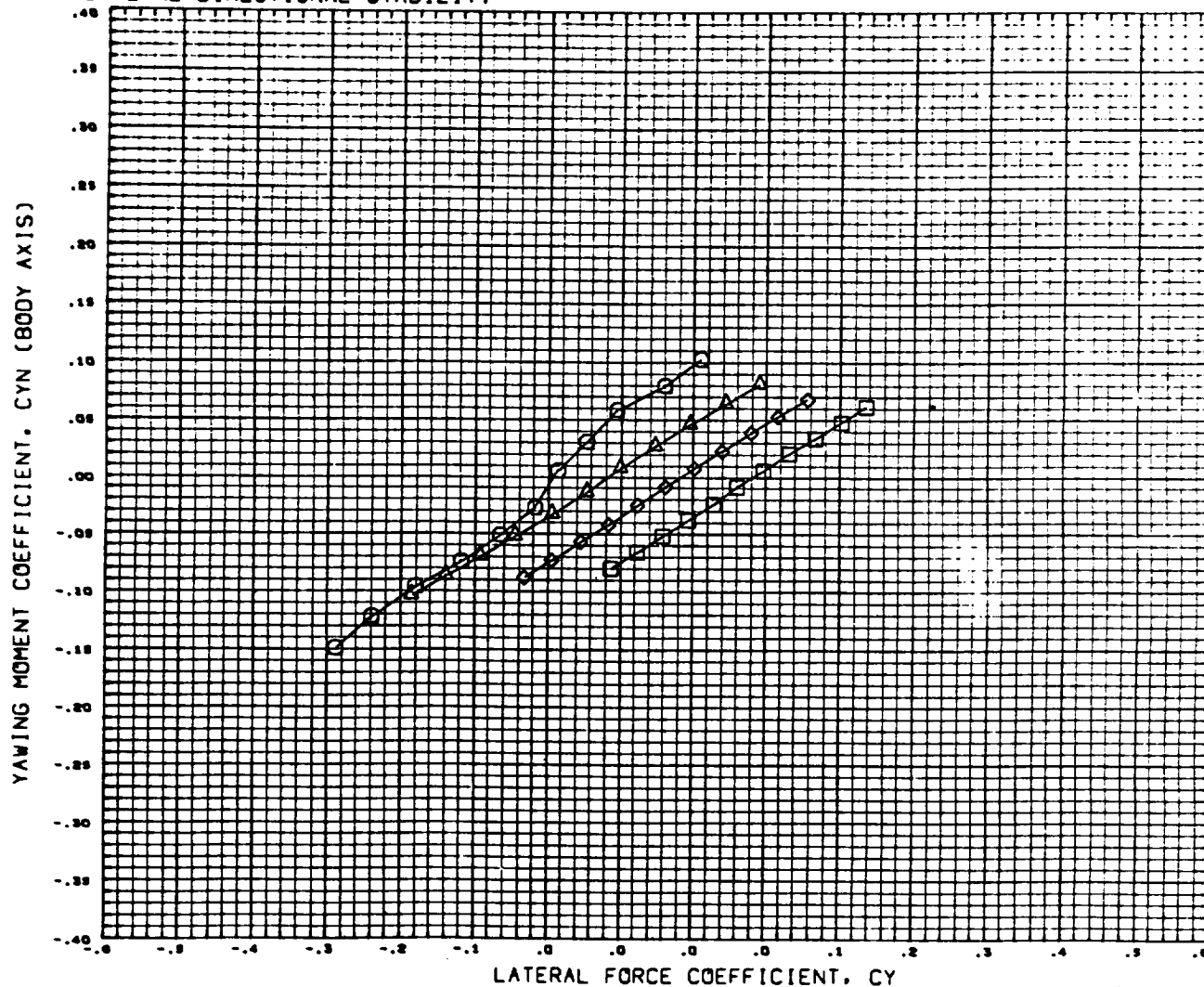


SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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△	1.954	DER 0.000 ELEVTR 0.000	LREF 3.1700 IN.
◇	3.400	AILRON 0.000	BREF 4.3920 IN.
□	4.959		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE 4E

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	1.194	ALPHA	30.000	DEL	0.000	SREF	7.7003 SQ. IN.
△	1.934	DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
□	3.480	ATLRON	0.000			BREF	4.3920 IN.
◇	4.929					XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

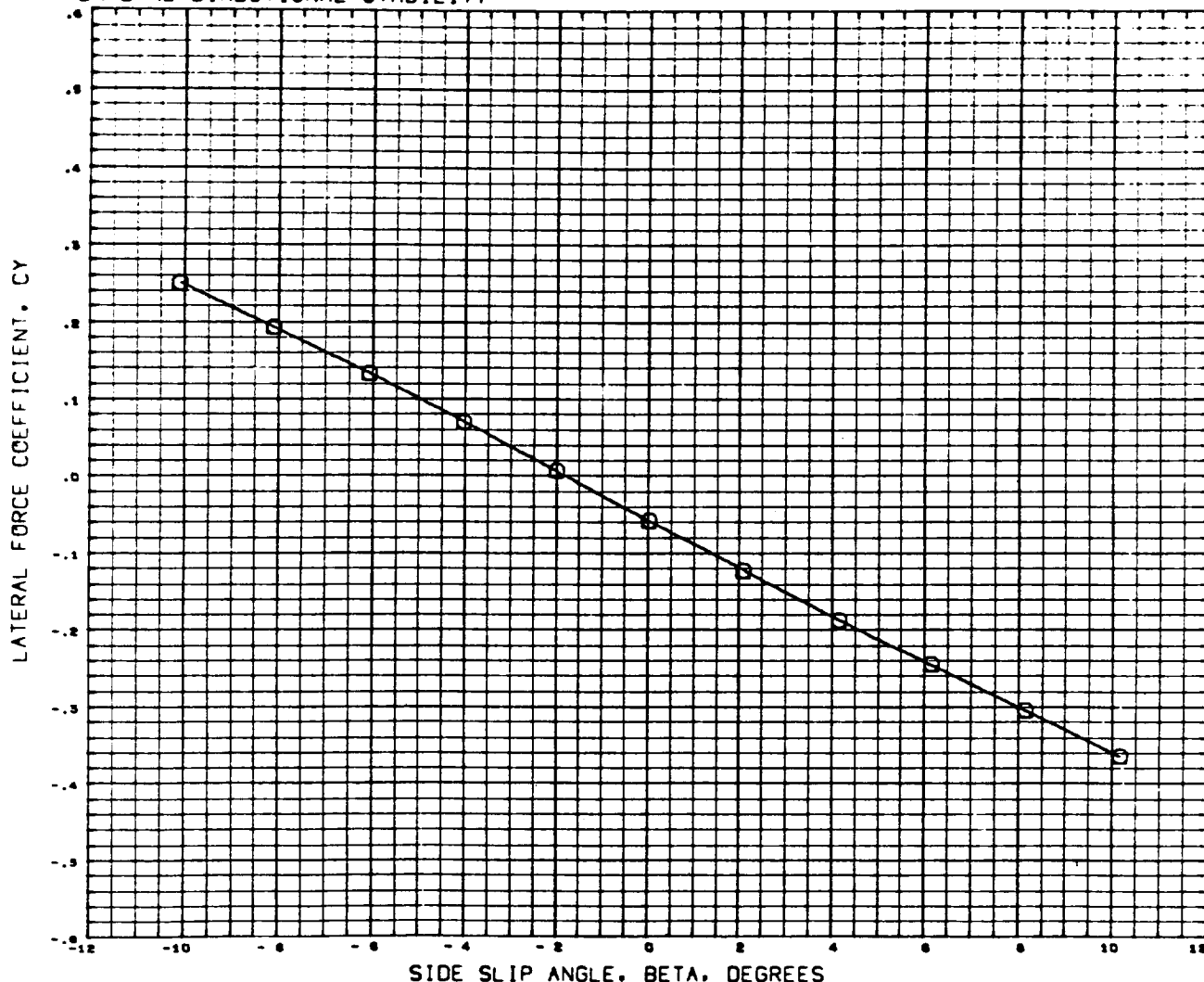
W9B2V1

(E3823J)

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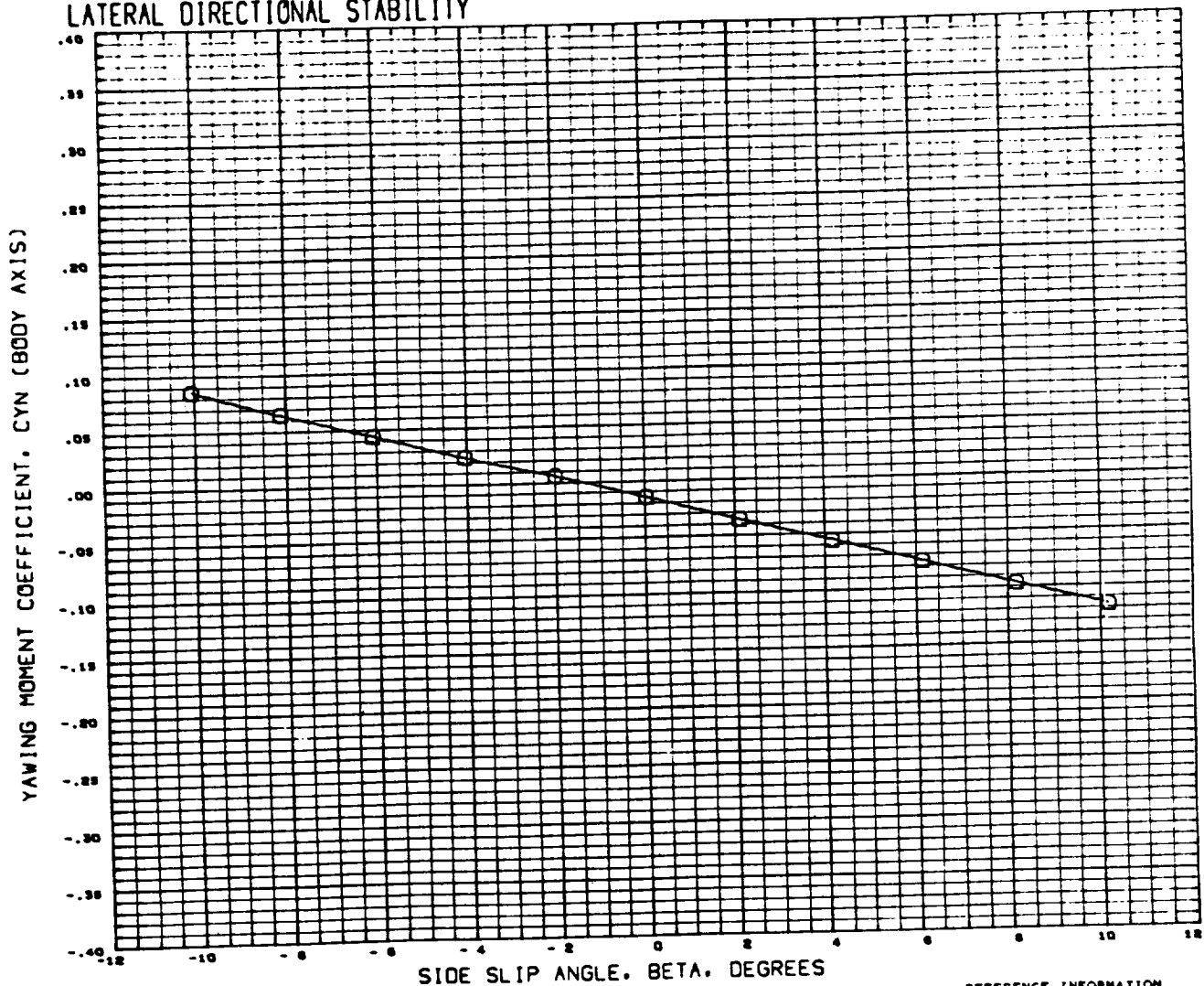
LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	ATLRON	SREF	LREF	BREF
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								2.4000
								0.0000
								0.0000
								0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY



SYMBOL \bigcirc MACH 4.959
 PARAMETRIC VALUES
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 DER 0.000 ELEVTR 0.000
 AILRON 0.000

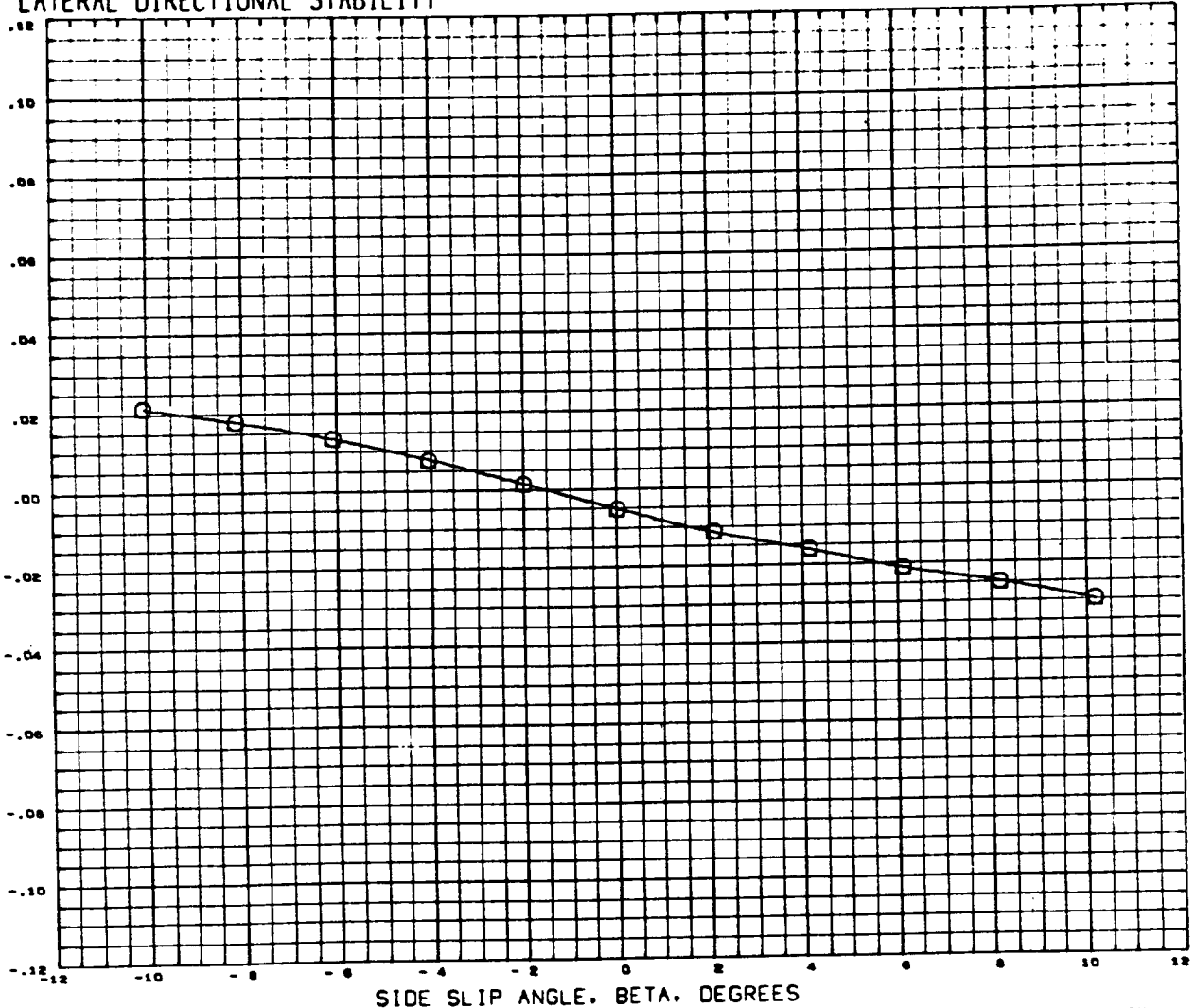
REFERENCE INFORMATION
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 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

ROLLING MOMENT COEFFICIENT, CBL (BODY AXIS)

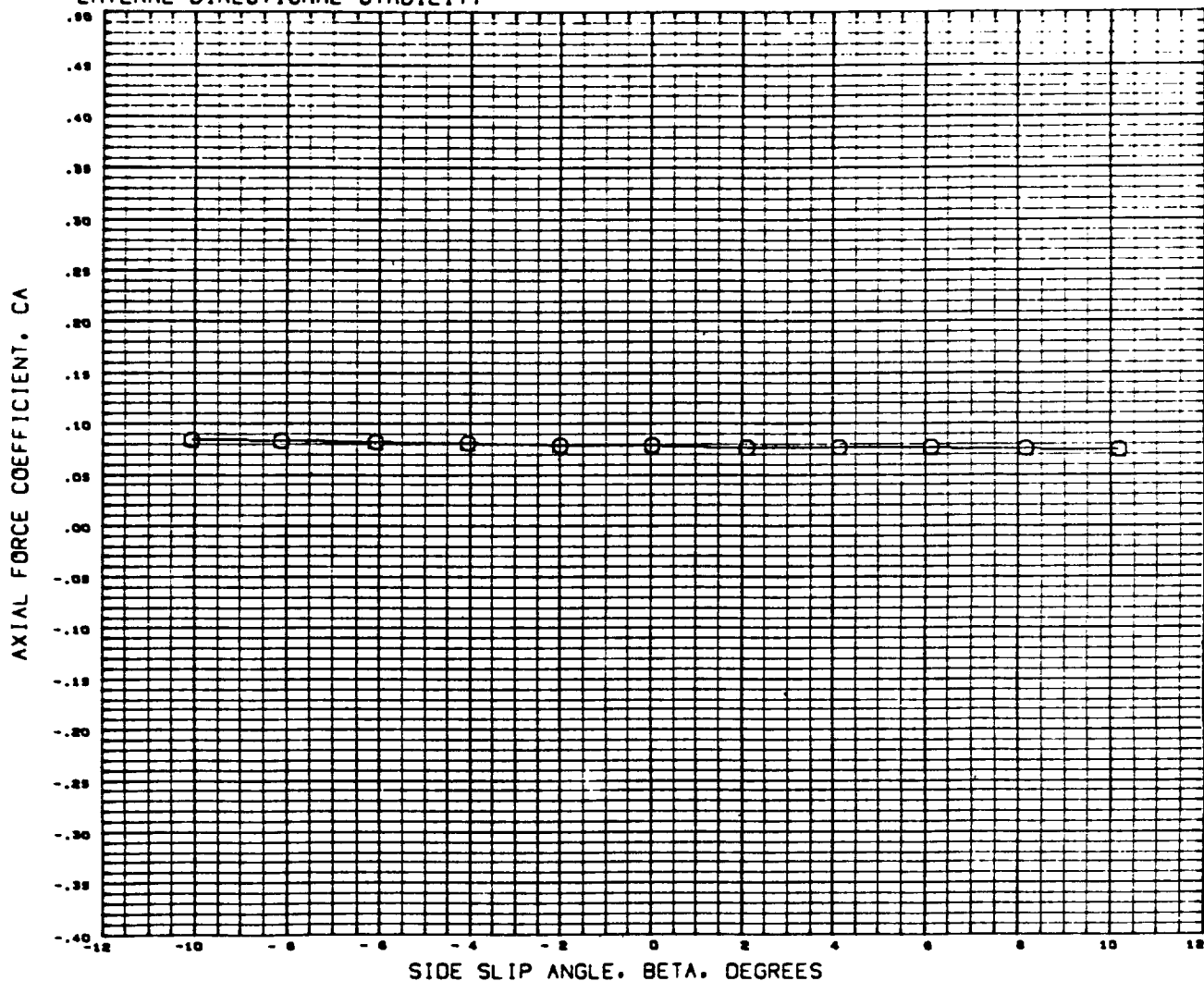


SYMBOL ○	MACH 4.959	PARAMETRIC VALUES			
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		DER	0.000	ELEVTR	0.000
		ATLRON	0.000		

REFERENCE INFORMATION		
SREF	4.9327	SQ. IN.
LREF	1.6680	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

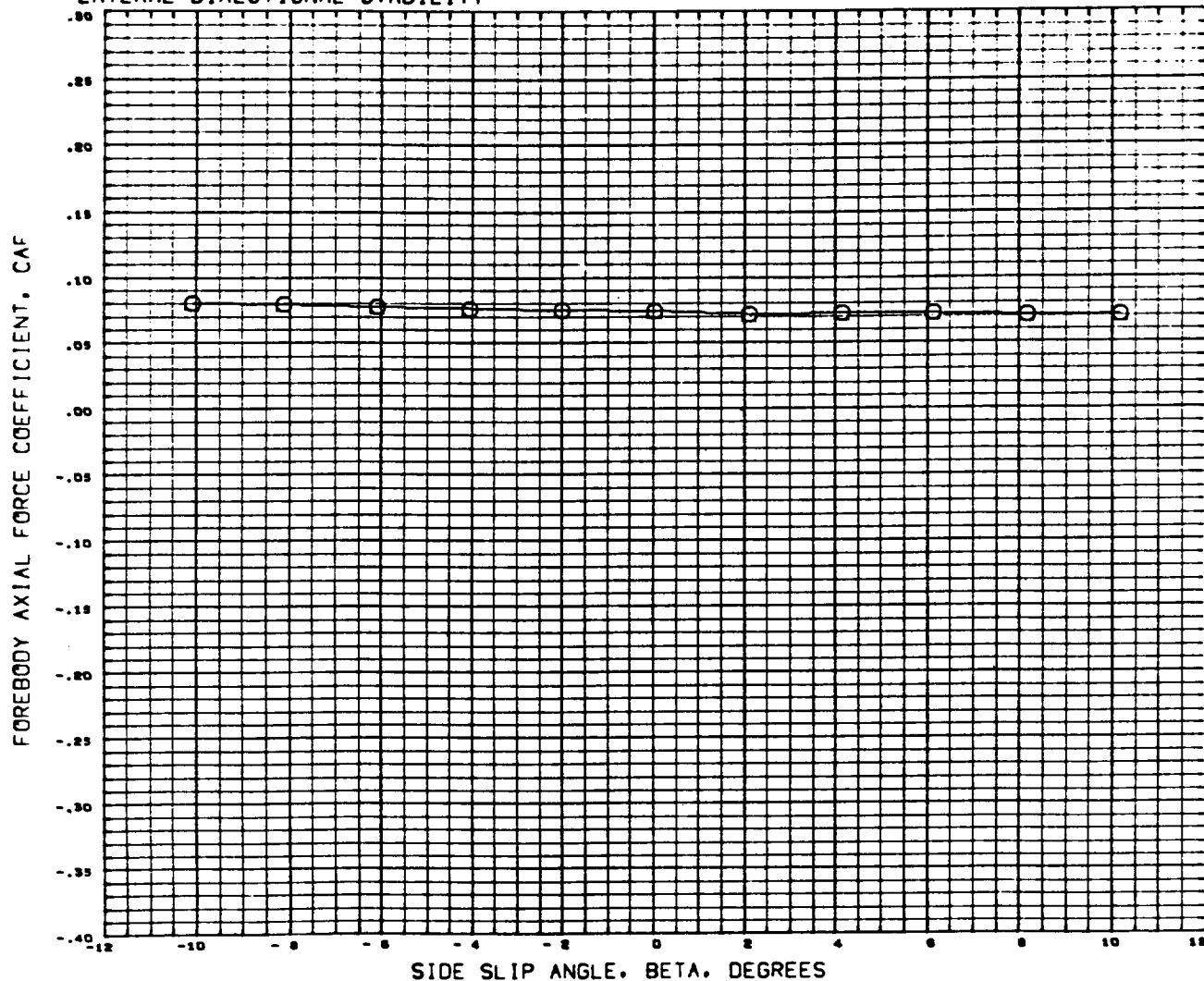


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O	4.959	DER	0.000	ELEVTR	0.000	LREF	1.8960	IN.
		AILRON	0.000			BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
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DATA HIST. CODE *E

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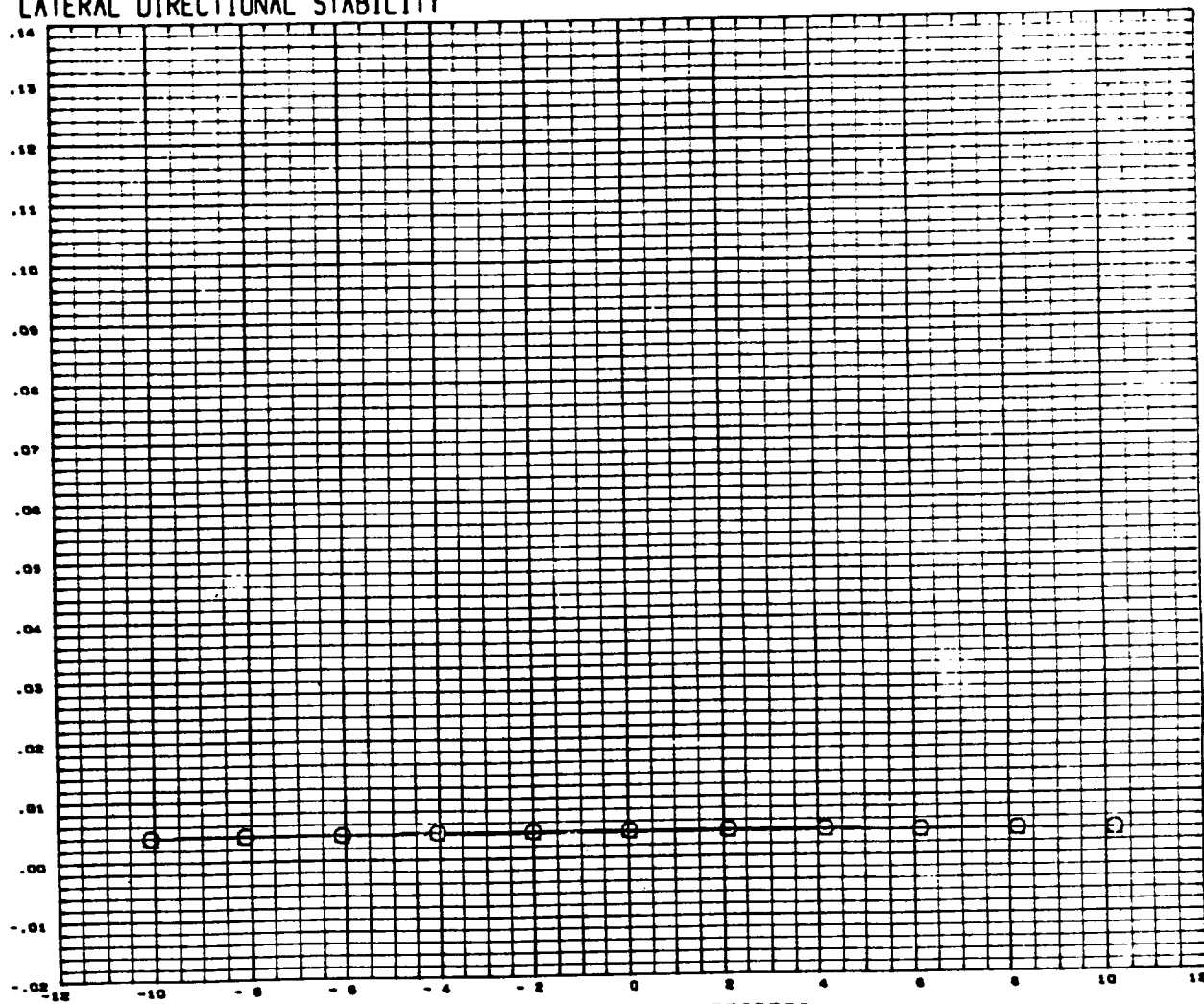
LATERAL DIRECTIONAL STABILITY



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION	
O		4.959	ALPHA	50.000	DEL	0.000		SREF	4.9327
			DER	0.000	ELEVTR	0.000		LREF	1.8980
			ATLRON	0.000				BREF	3.7200
								XMRP	2.4000
								YMRP	0.0000
								ZMRP	0.0000
								SCALE	0.0025

LATERAL DIRECTIONAL STABILITY

BASE AXIAL FORCE COEFFICIENT, CAB



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL \circ MACH 4.939
 PARAMETRIC VALUES
 ALPHA 50.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000

REFERENCE INFORMATION
 SREF 4.9327 SQ. IN.
 LREF 1.6960 IN.
 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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AR11981-3

MODEL

W4B2V2

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LATERAL DIRECTIONAL STABILITY



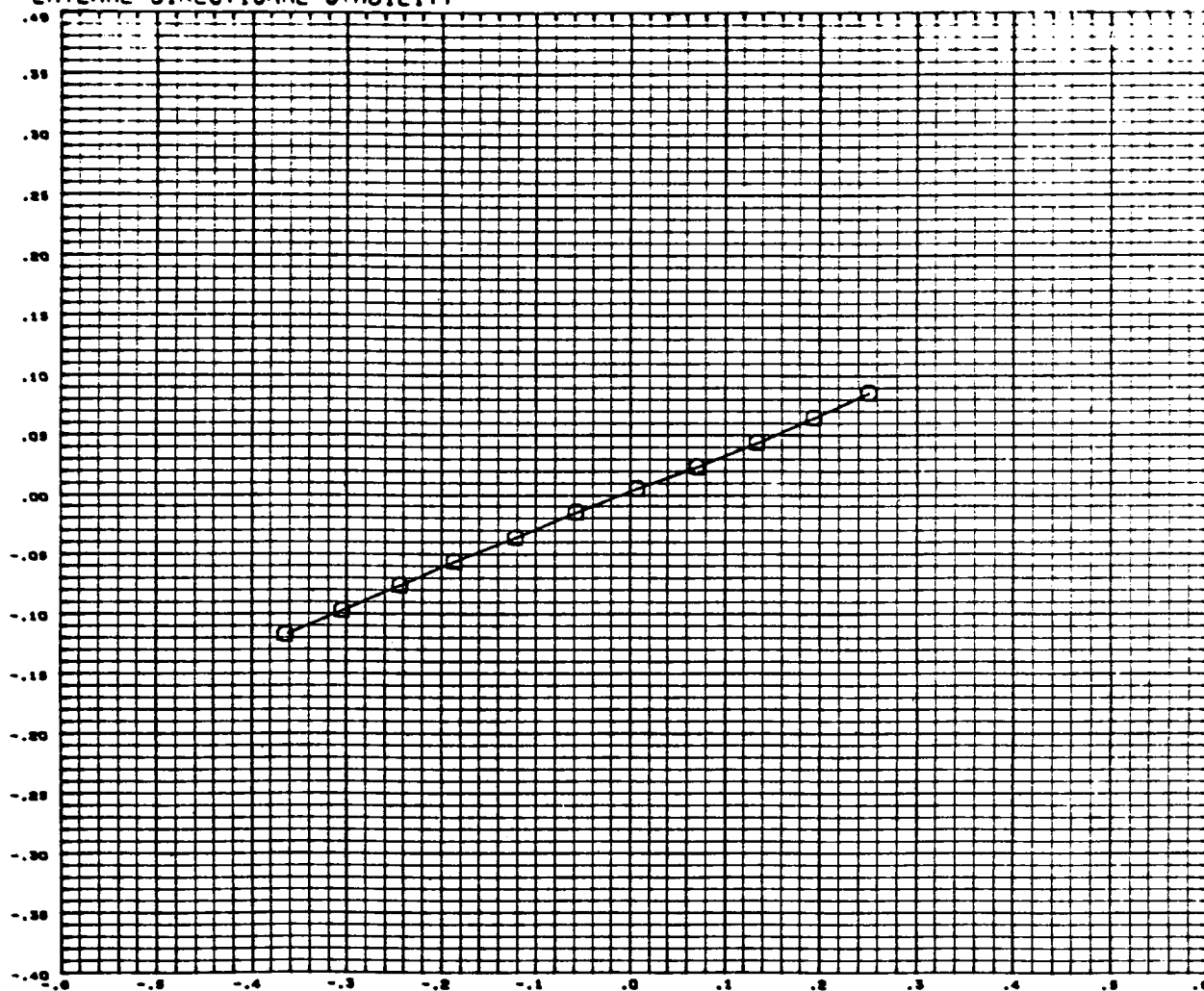
SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		4.959	ALPHA	50.000	DEL	0.000		SREF	4.9327	50. IN.
			DER	0.000	ELEVTR	0.000		LREF	1.6980	IN.
			ATLRON	0.000				SREF	3.7200	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



LATERAL FORCE COEFFICIENT, CY

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.950	ALPHA	50.000	DEL	0.000	SREP	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.6980	IN.
		ATTROH	0.000			BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W4B2V2

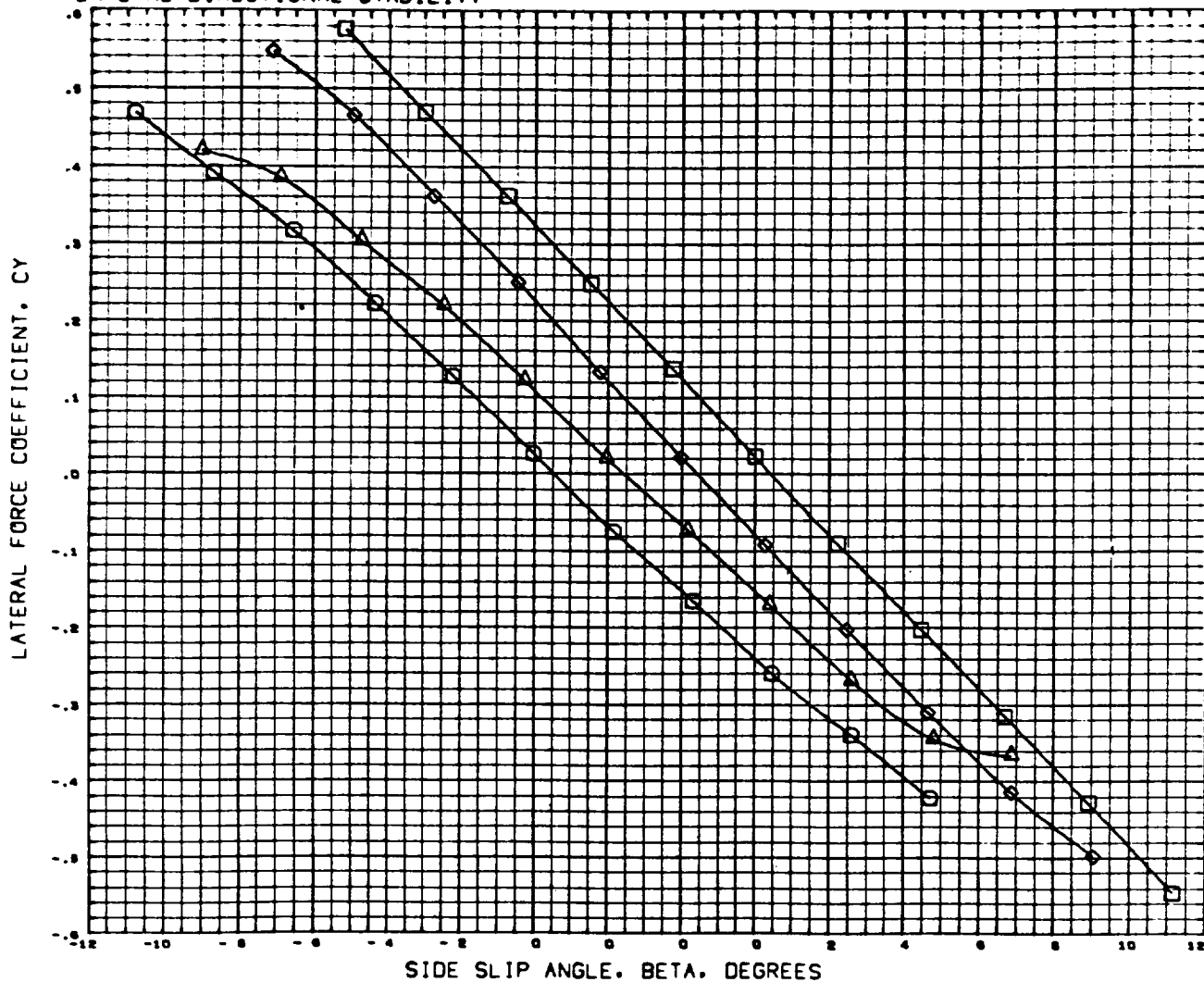
(E3828J)

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LATERAL DIRECTIONAL STABILITY

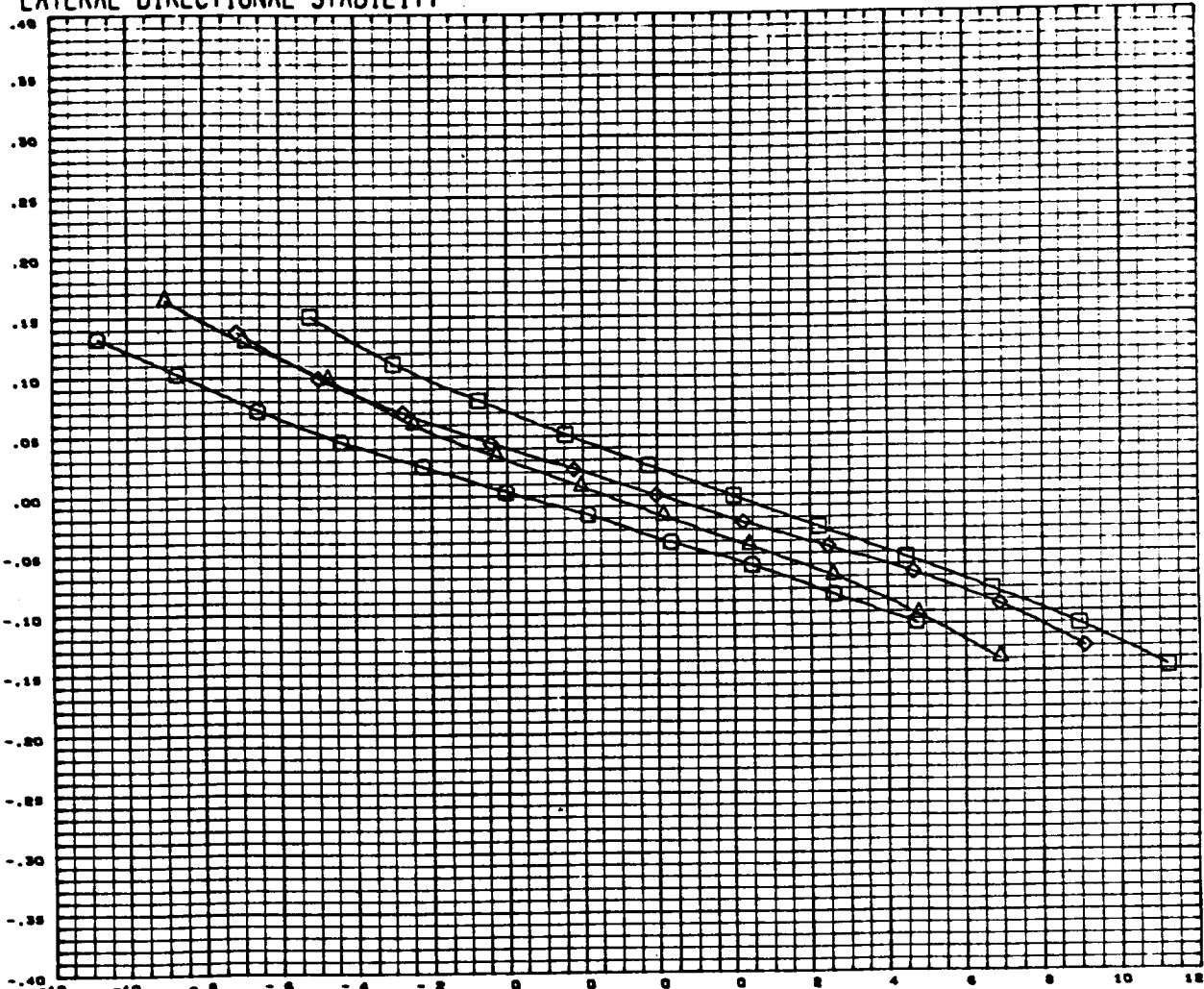


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.599	ALPHA	- 10.000	DEL	0.000	SRFP	4.6223 SQ. IN.
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◇	1.001	AILRON	0.000	CANARD	0.000	BRFP	4.3000 IN.
□	1.198					ZHRP	2.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

YAWING MOMENT COEFFICIENT, CYN (BODY AXIS)



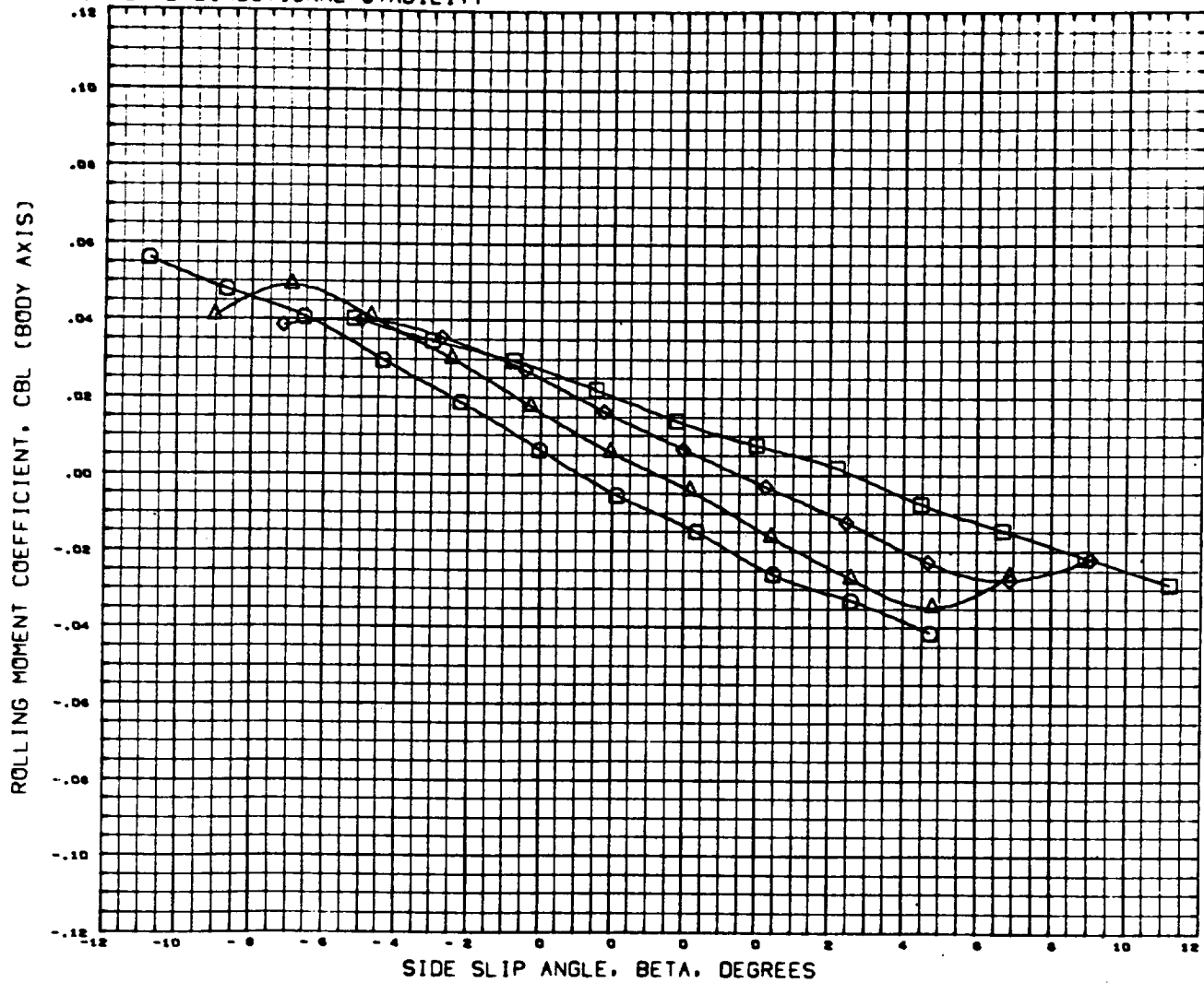
SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL	MACH	PARAMETRIC VALUES			
○	0.999	ALPHA	-10.000	DEL	0.000
△	0.900	DER	0.000	ELEVTR	0.000
◇	1.001	AILRON	0.000	CANARD	0.000
□	1.198				

REFERENCE INFORMATION		
SREF	4.6225	sq. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY

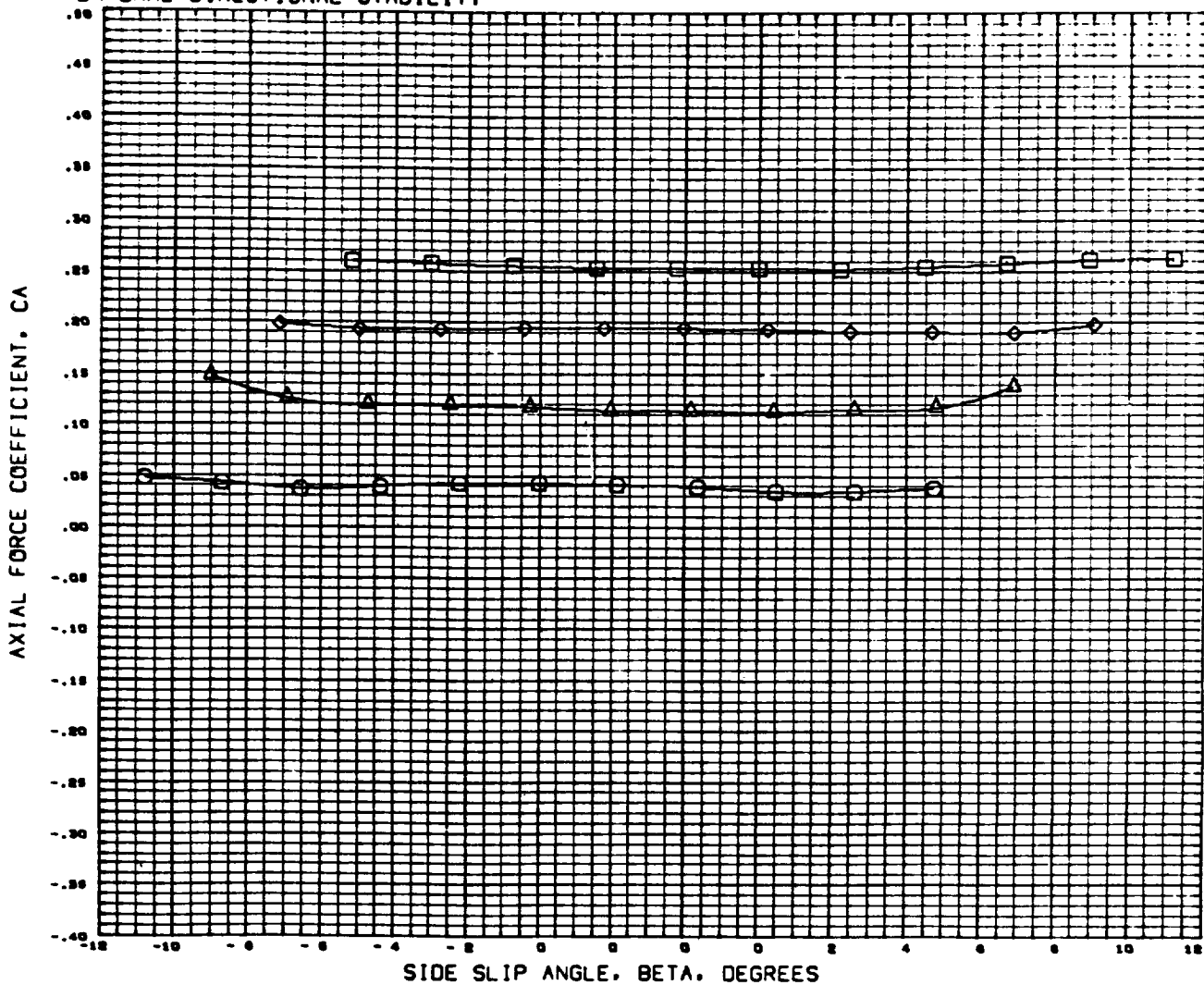


SYMBOL	MACH	PARAMETRIC VALUES			
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△	0.900	DER	0.000	ELEVTR	0.000
◇	1.001	ATLRON	0.000	CANARD	0.000
□	1.100				

DATA HIST. CODE *E

REFERENCE INFORMATION		
BREF	4.6225	80. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
YNRP	2.4000	IN.
YNRP	0.0000	IN.
YNRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
□	0.599	ALPHA	- 10.000	DEL	0.000	SREP	4.6223	sq. in.
◇	0.900	DER	0.000	ELEVTR	0.000	LREP	1.3360	in.
△	1.001	ATLRON	0.000	CANARD	0.000	BREP	4.3000	in.
○	1.198					XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0023	

DATA HIST. CODE *E

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AR1198I-3

MODEL

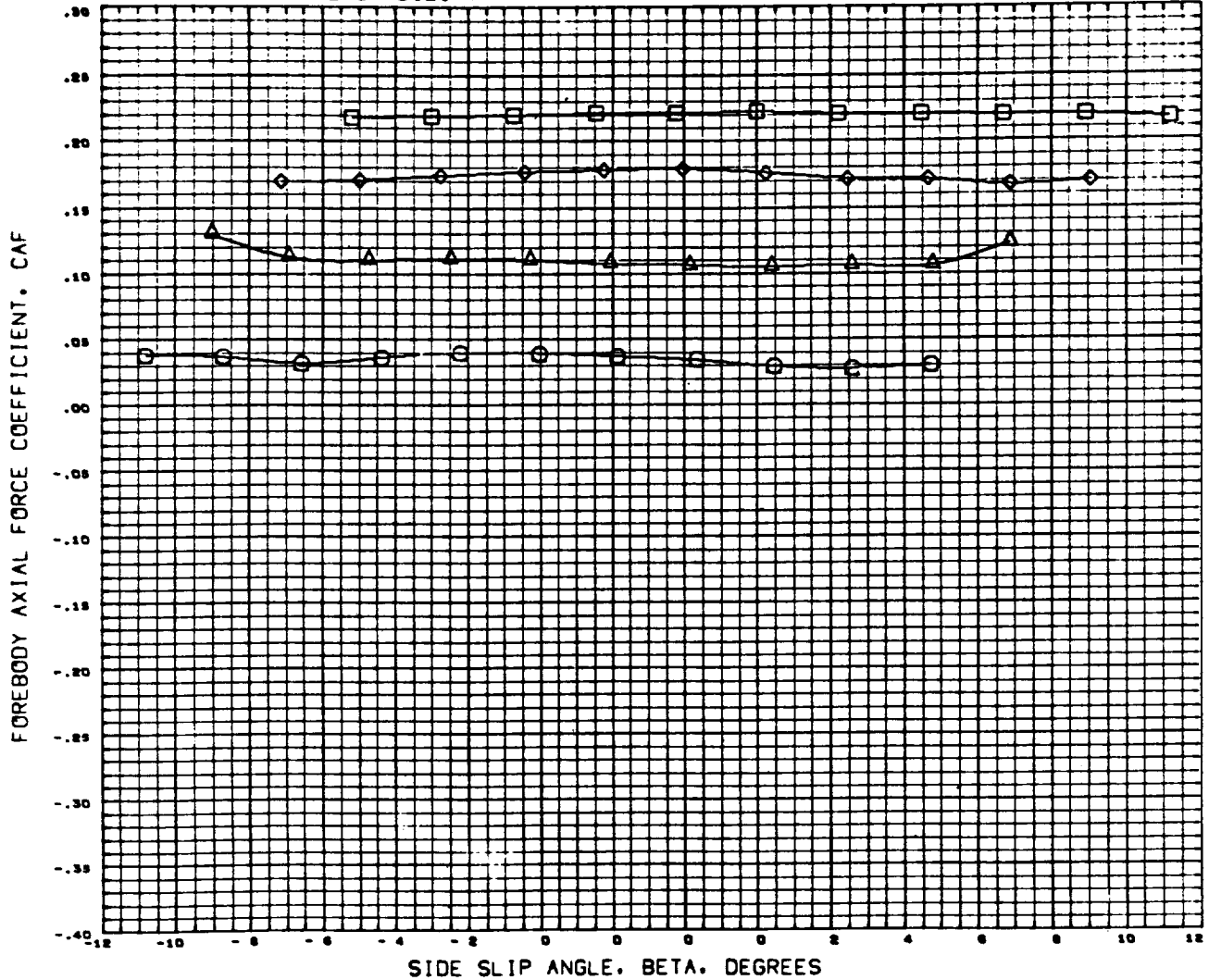
W6B2011C12V2 (E3841L)

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PAGE

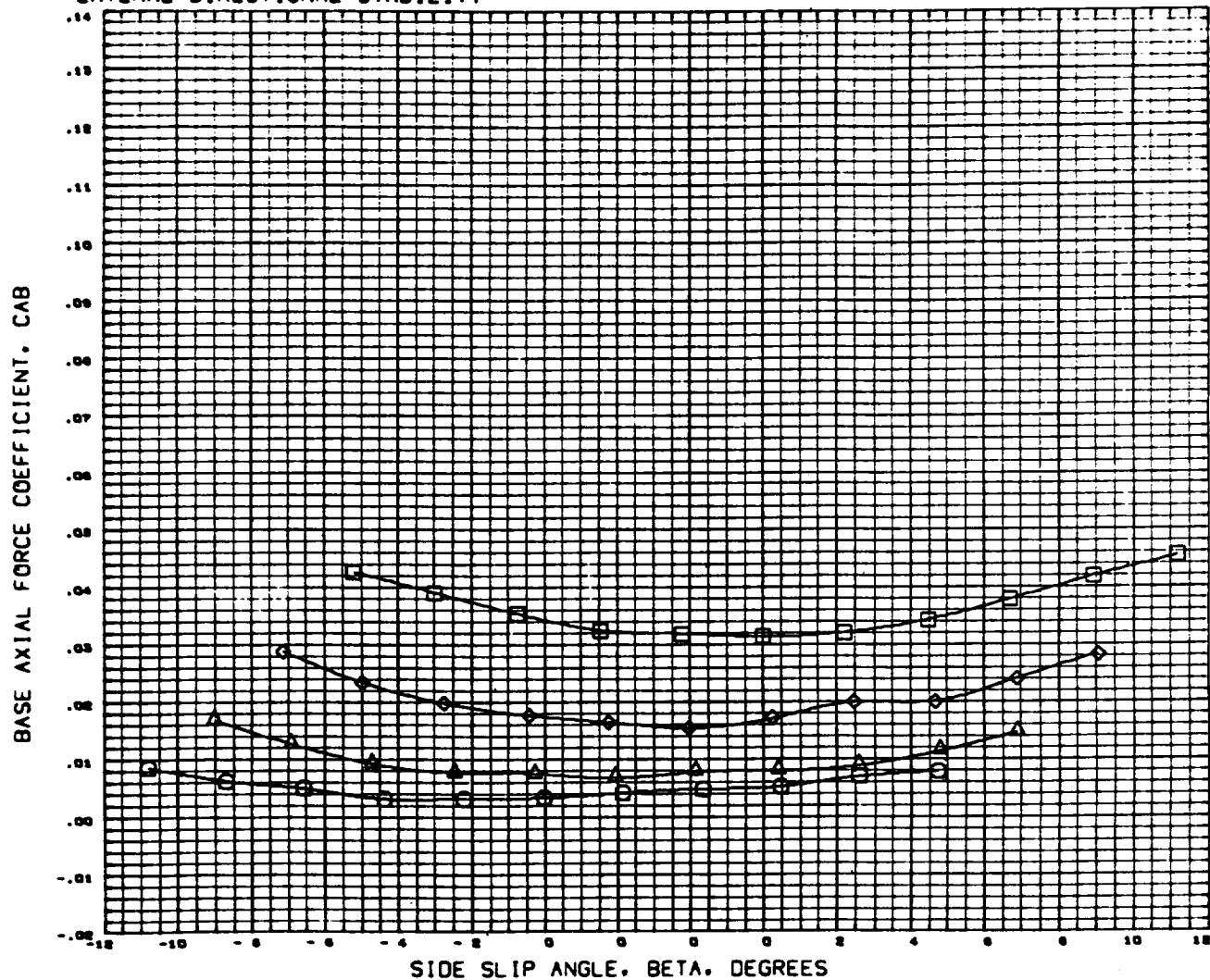
346

LATERAL DIRECTIONAL STABILITY



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREP	LREP	BREP
○	0.999	-10.000	0.000	0.000	0.000	4.6225	1.9360	4.3000
△	0.900	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
◇	1.001	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0025
□	1.198							

LATERAL DIRECTIONAL STABILITY

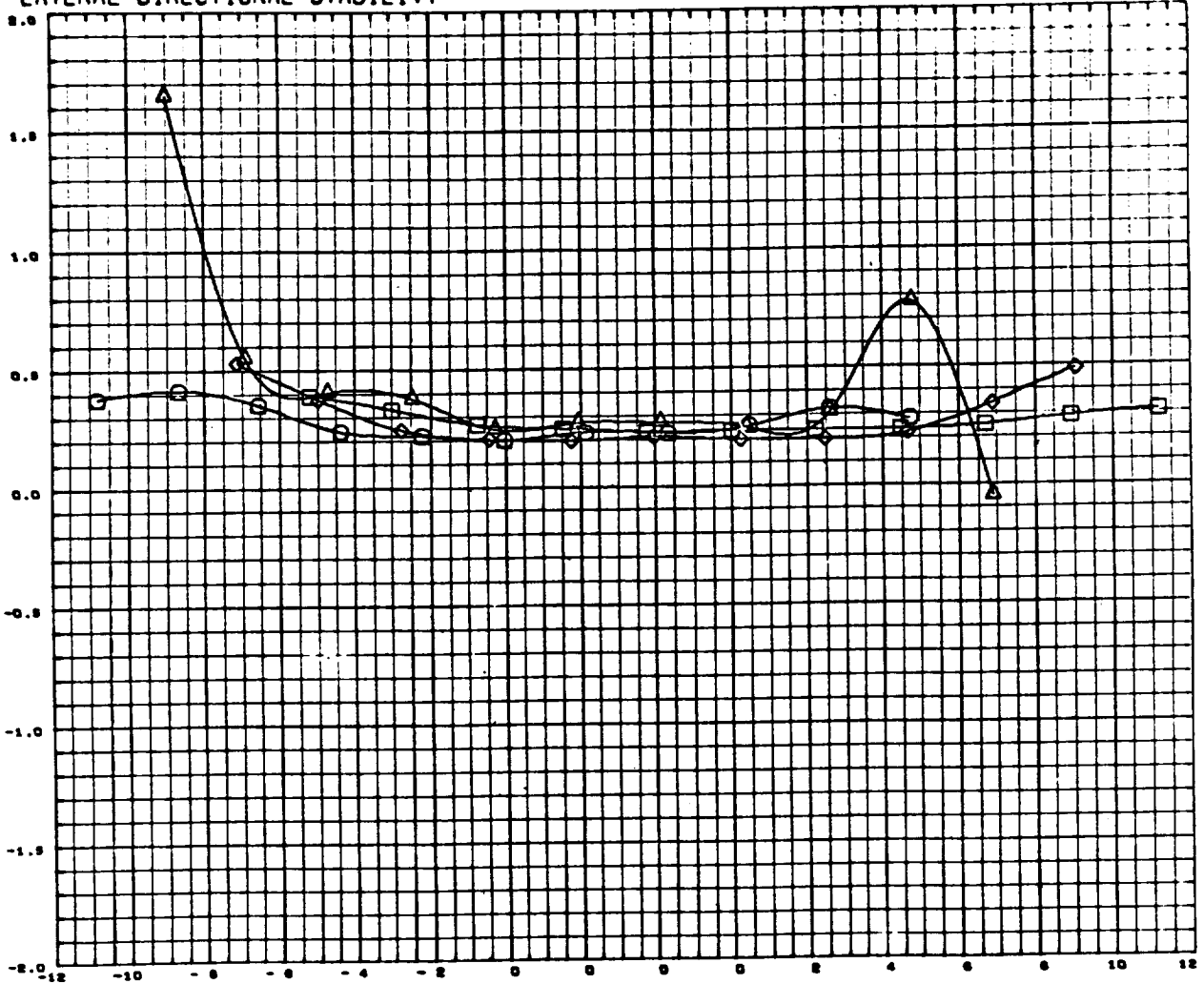


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LRFP	BRFP
□	0.599	-10.000	0.000	0.000	0.000	4.6223	1.3360	4.3000
◇	0.900	0.000	0.000	0.000	0.000	2.4000	0.0000	0.0000
△	1.001	0.000	0.000	0.000	0.000	0.0000	0.0000	0.0000
○	1.198					0.0023		

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL
○
△
◇
□

MACH
0.399
0.900
1.001
1.198

PARAMETRIC VALUES
ALPHA
DER
AILRON

- 10.000
0.000
0.000

DEL
ELEVTR
CANARD

0.000
0.000
0.000

REFERENCE INFORMATION

SREF	4.6223	80. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
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ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

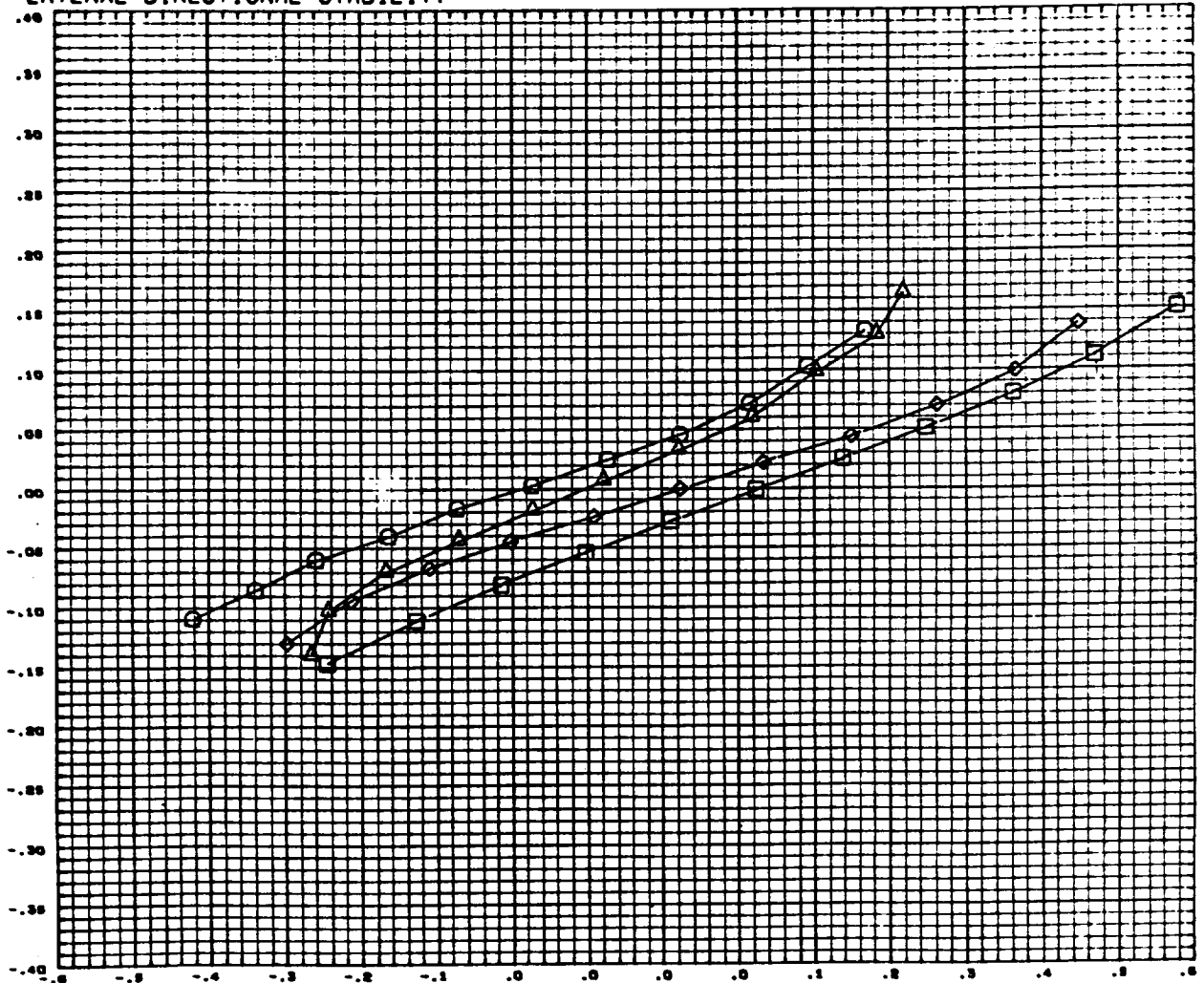
W6B2011C12V2 (E3841L)

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LATERAL DIRECTIONAL STABILITY

YAWING-MOMENT COEFFICIENT, CYN (BODY AXIS)



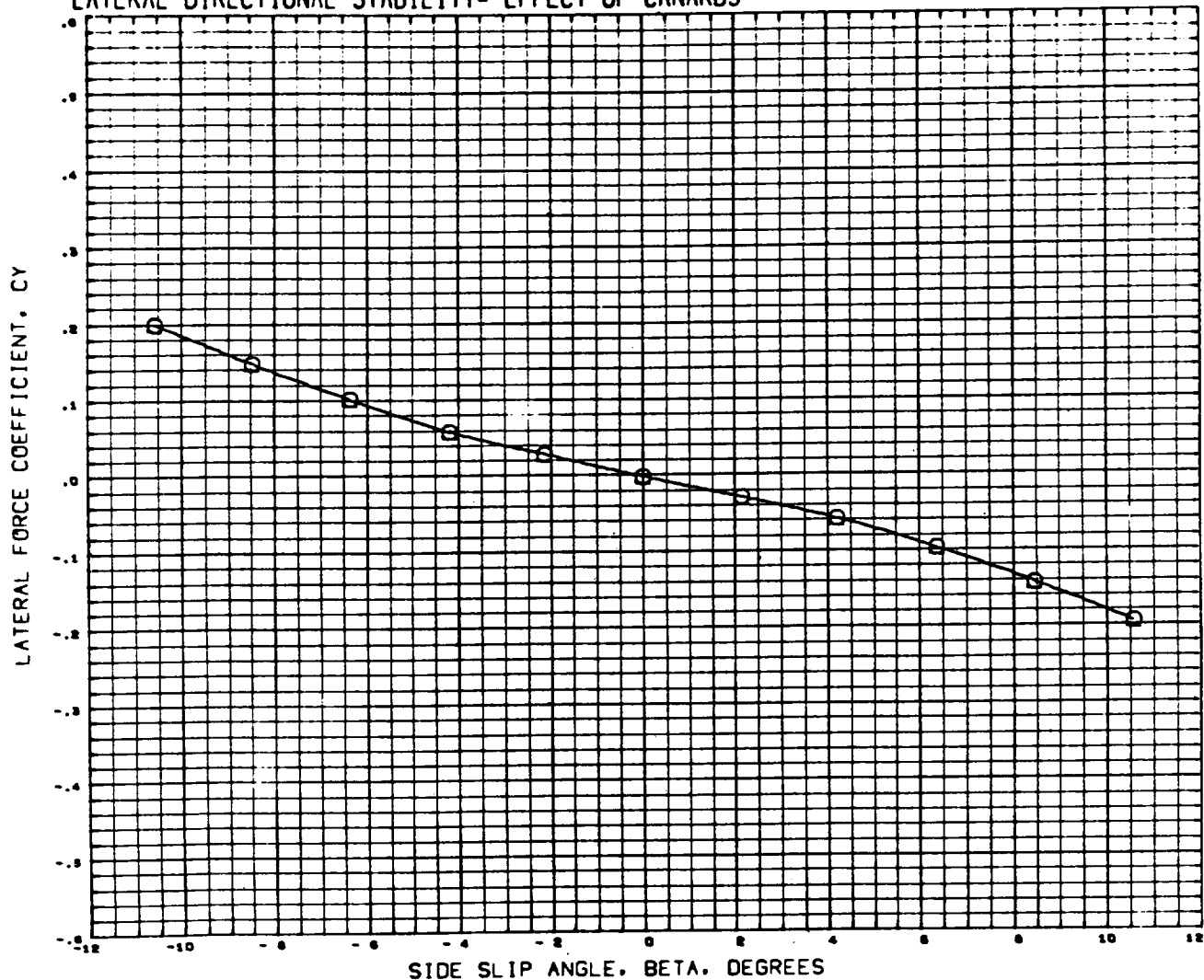
LATERAL FORCE COEFFICIENT, CY

SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.999	ALPHA	-10.000	DEL	0.000	SREP	4.6225	SQ. IN.
◇	0.900	DER	0.000	ELEVTR	0.000	LREP	1.5360	IN.
△	1.001	AILRON	0.000	CANARD	0.000	BREP	4.3000	IN.
□	1.100					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
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 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

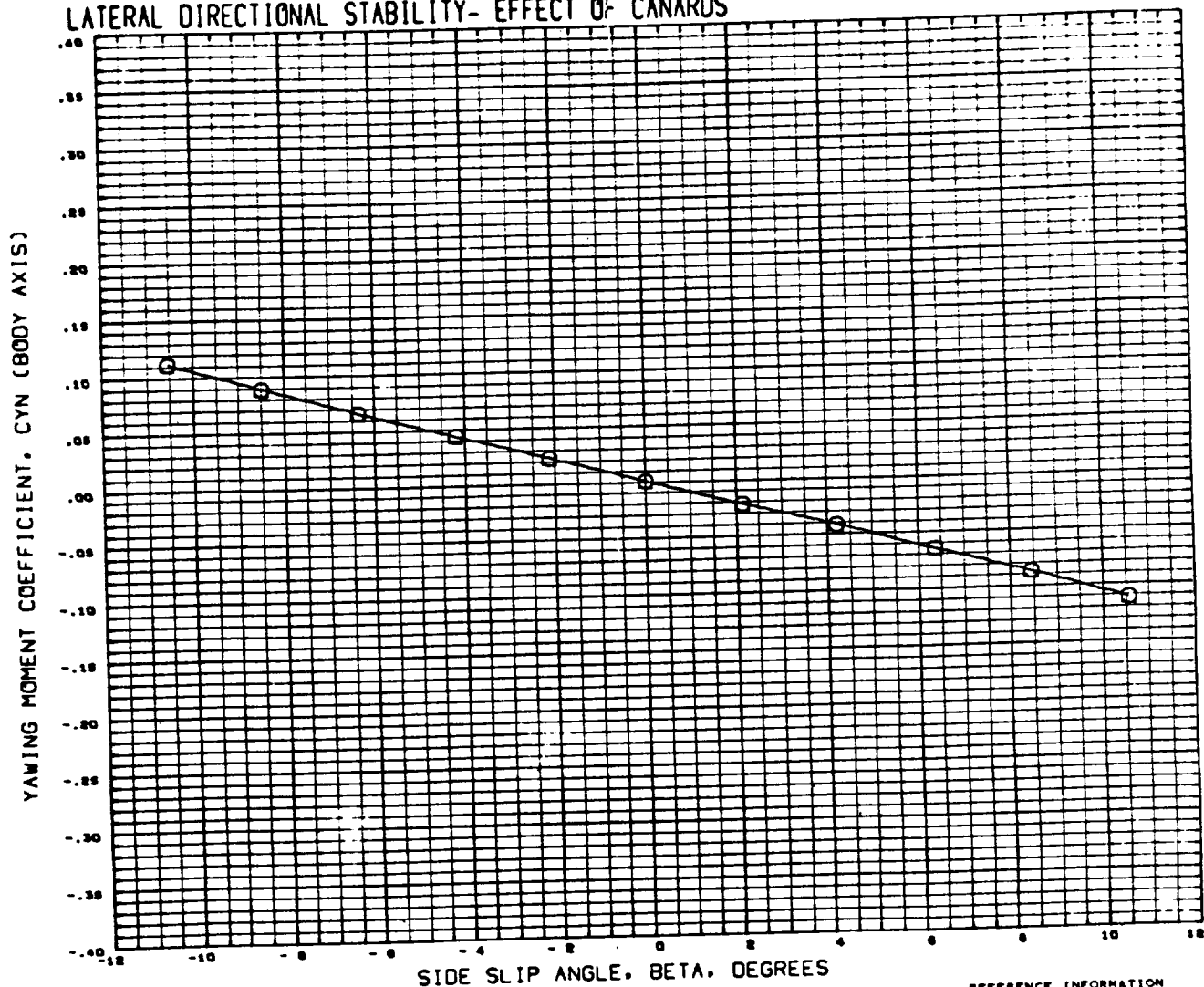
MODEL

B2C12

(E3803H) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.999 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

4496-MSFC

AR11981-3

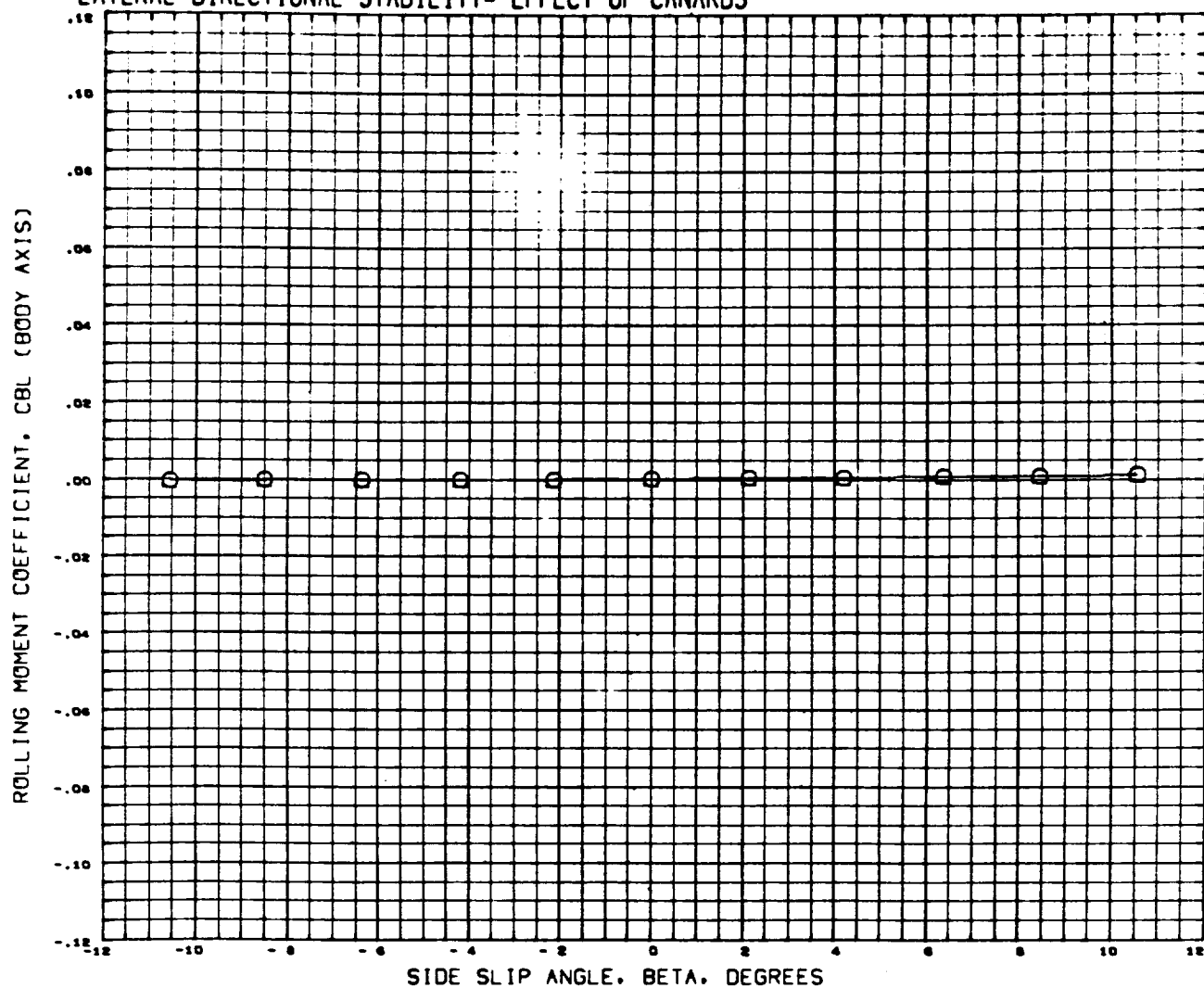
MODEL

B2C12

(E3803H) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

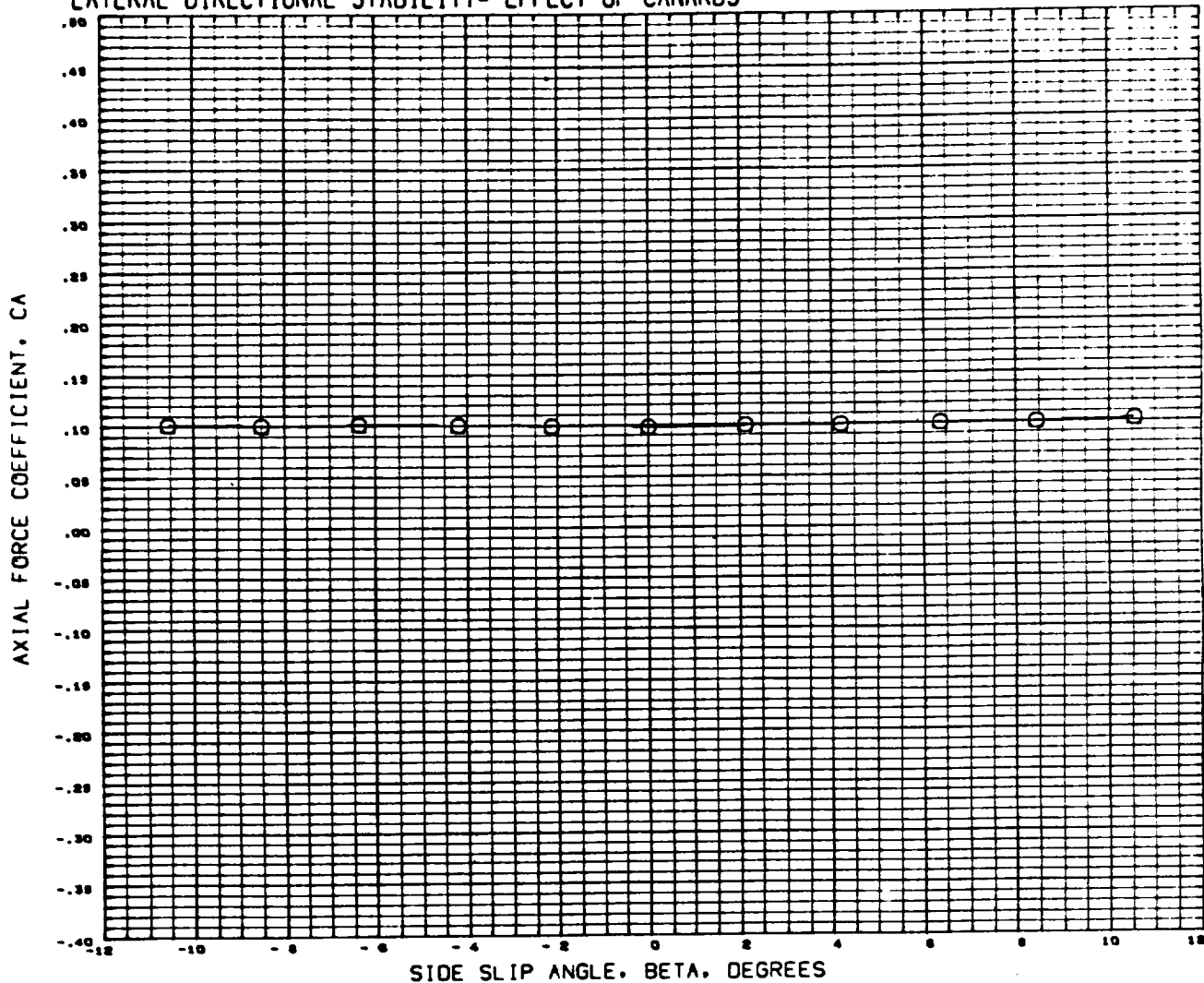


SYMBOL MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
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 LREF 1.9360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



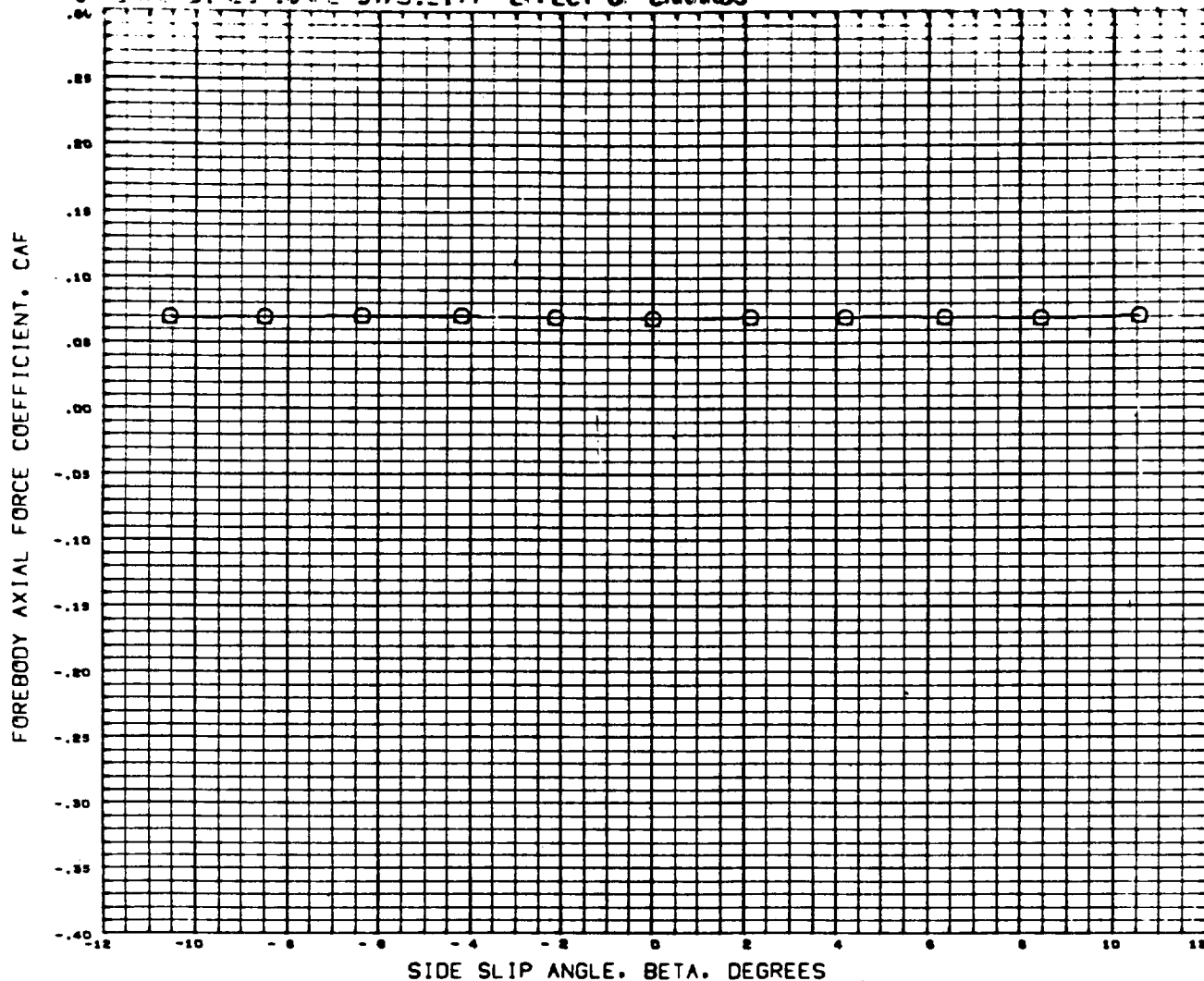
SYMBOL \square MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
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 LREP 1.5360 IN.
 BREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

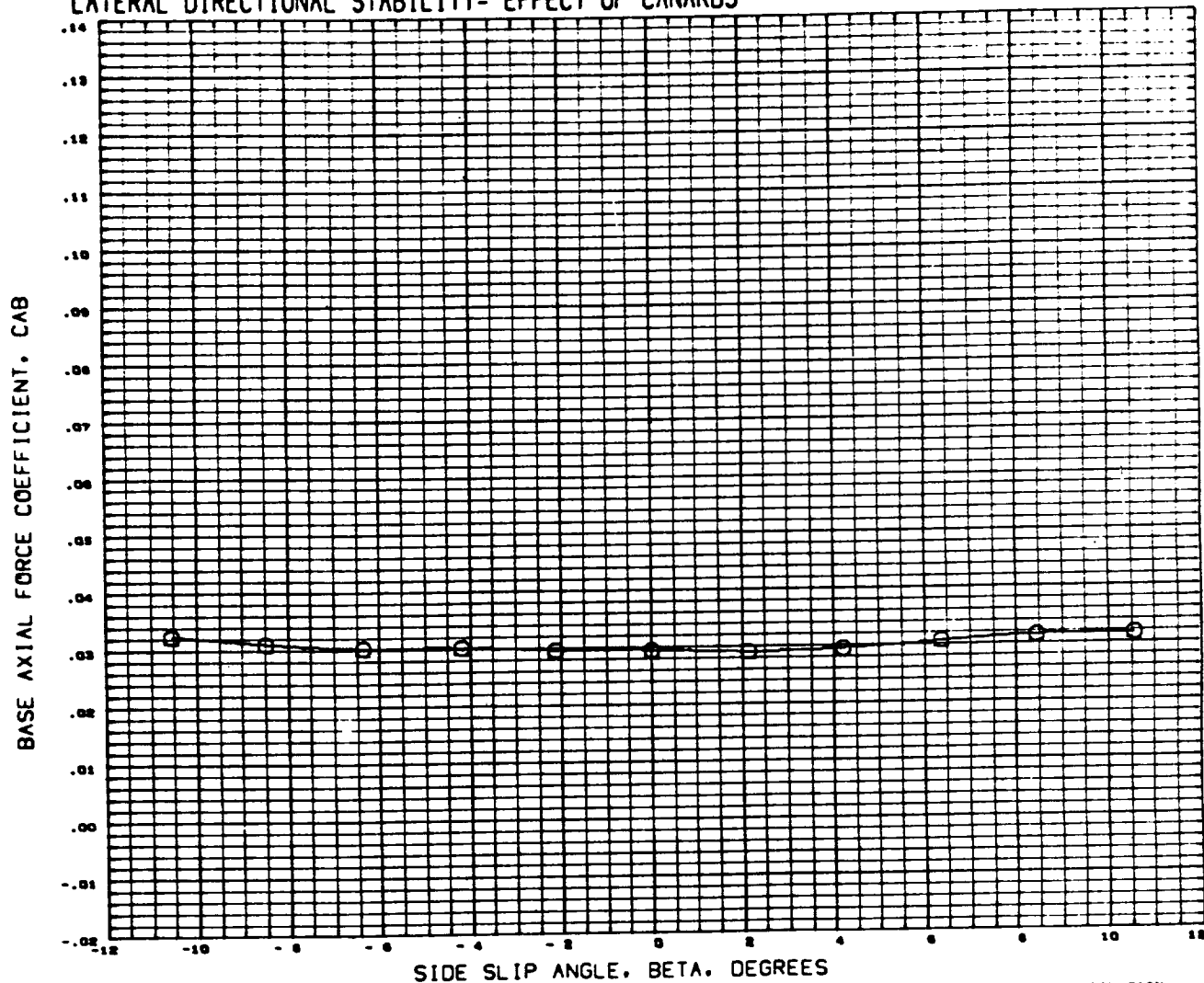


SYMBOL \bigcirc MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
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 SREF 4.3000 1N.
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 ZMRP 0.0000 1N.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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MODEL

B2C12

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH 1.959 ALPHA 15.000 CANARD - 20.000

REFERENCE INFORMATION
 BREF 4.6225 IN.
 LREF 1.9360 IN.
 QREF 4.3000 IN.
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 SCALE 0.0023

DATA HIST. CODE *E

496-MSFC

AR11981-3

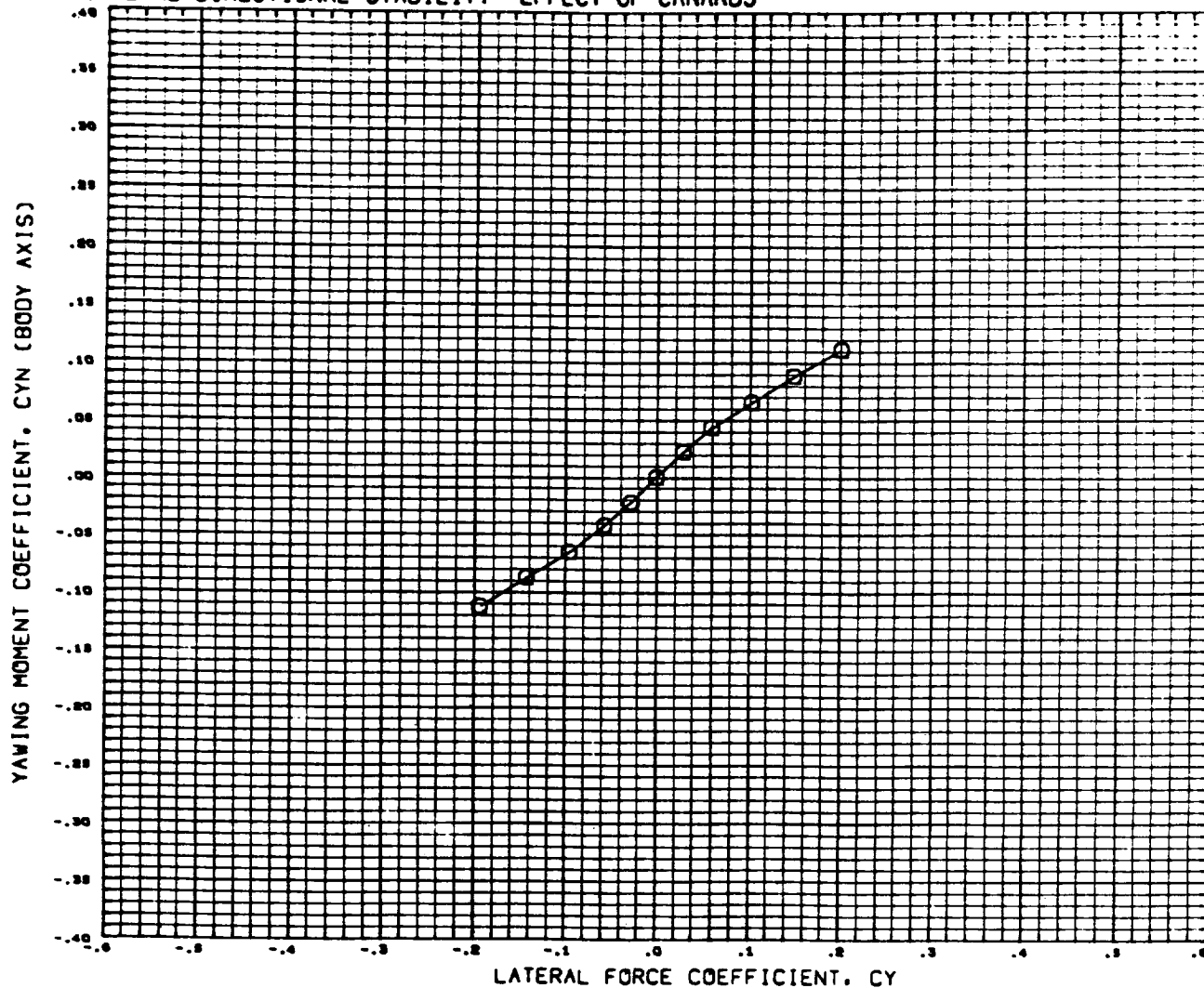
MODEL

B2C12

(E3803H) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

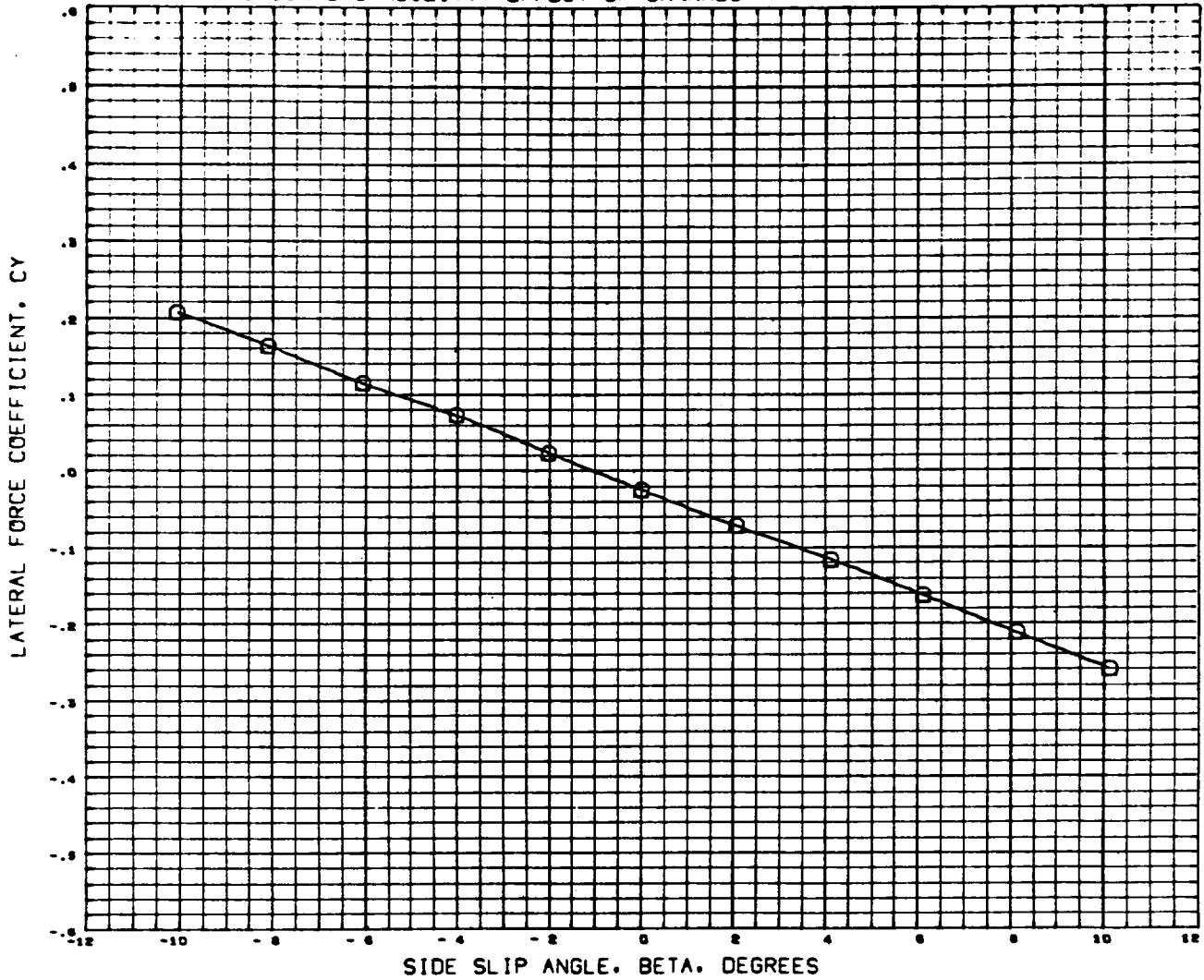


SYMBOL \bigcirc MACH 1.959 ALPHA 19.000 CANARD - 20.000

DATA HIST. CODE 9E

REFERENCE INFORMATION
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 LREP 1.5360 IN.
 BREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

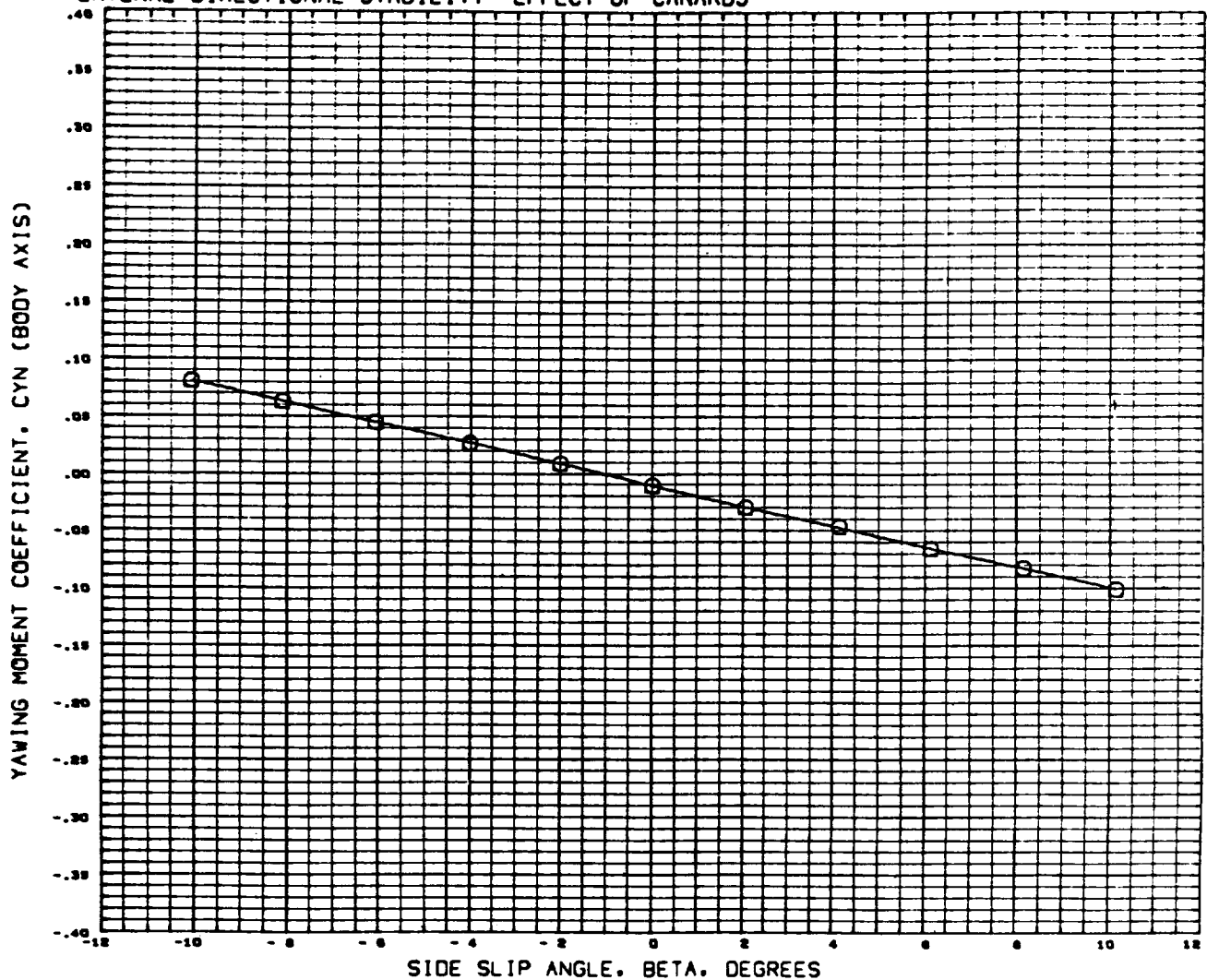


SYMBOL \bigcirc MACH 4.959 ALPHA 30.000 CANARD - 40.000
 PARAMETRIC VALUES

REFERENCE INFORMATION
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 LREF 1.9360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.959 ALPHA 30.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE *E

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AR11981-3

MODEL

B2C12

(E38041)

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH ALPHA PARAMETRIC VALUES
 O 4.959 30.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 4.0225 SQ. IN.
 LREF 1.9360 IN.
 BREF 4.3000 IN.
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 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 9E

495-MSFC

AR11981-3

MODEL

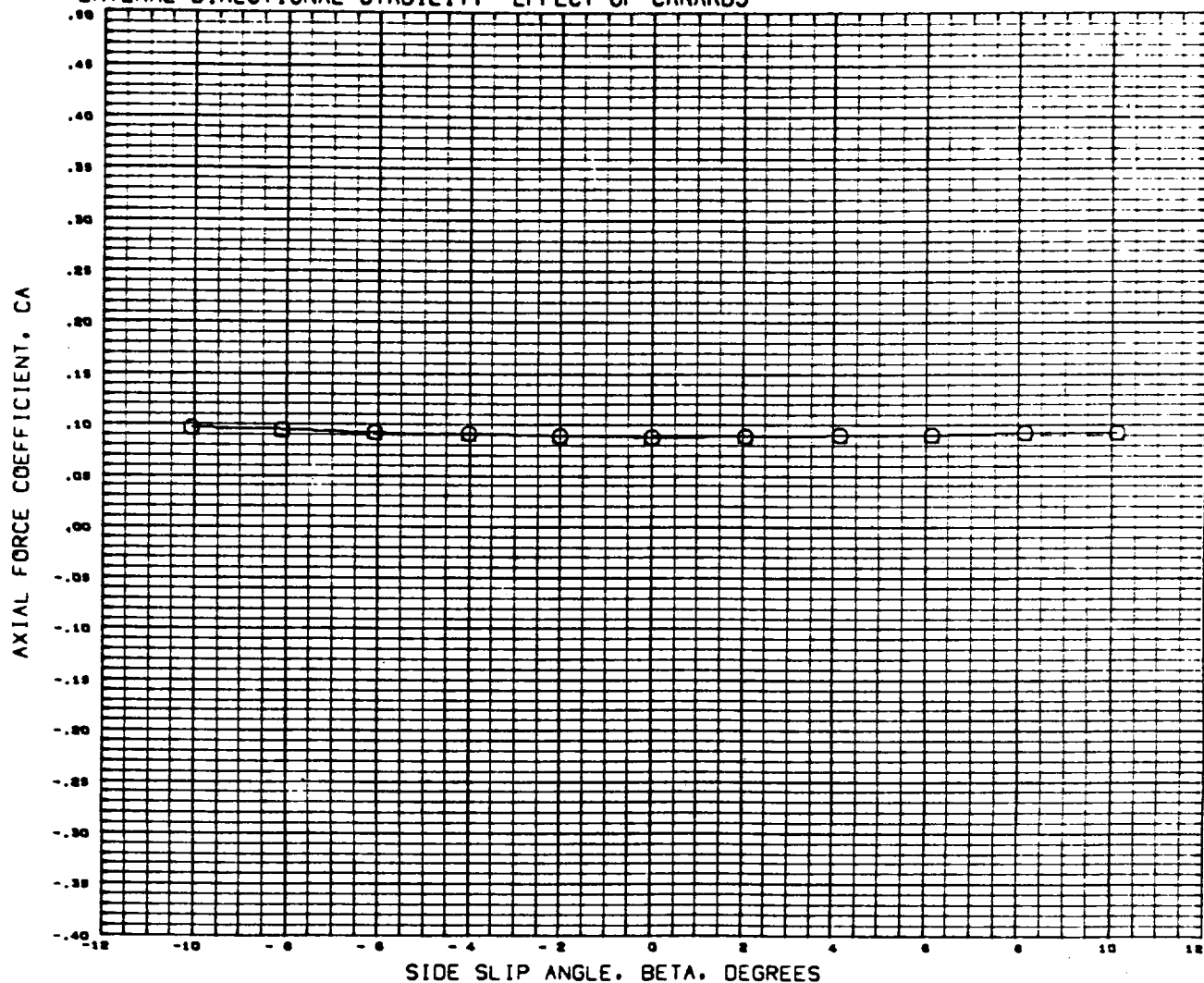
B2C12

(E38041) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

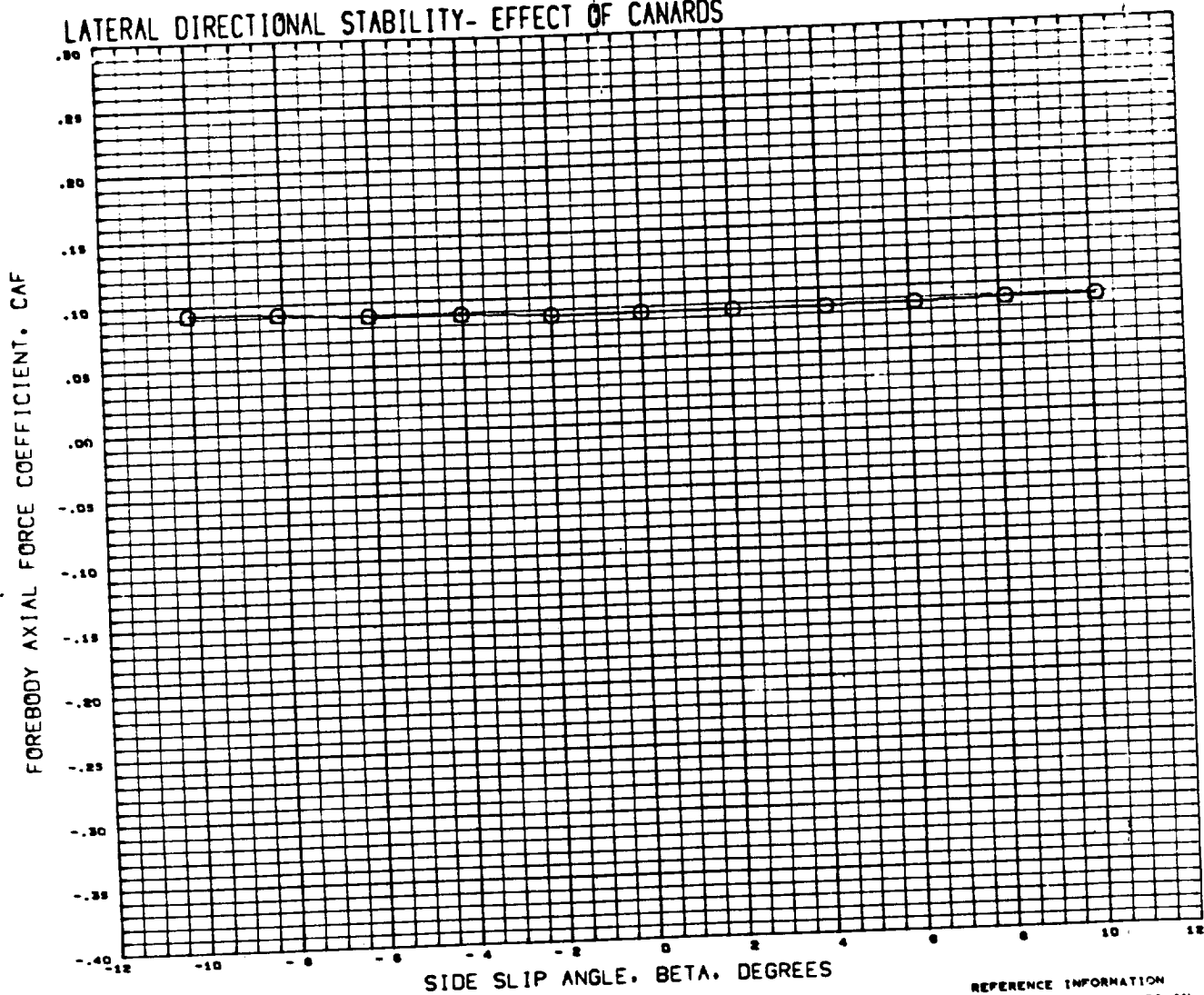


SYMBOL \bigcirc MACH 4.959 ALPHA 30.000 CANARD - 40.000

REFERENCE INFORMATION
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 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

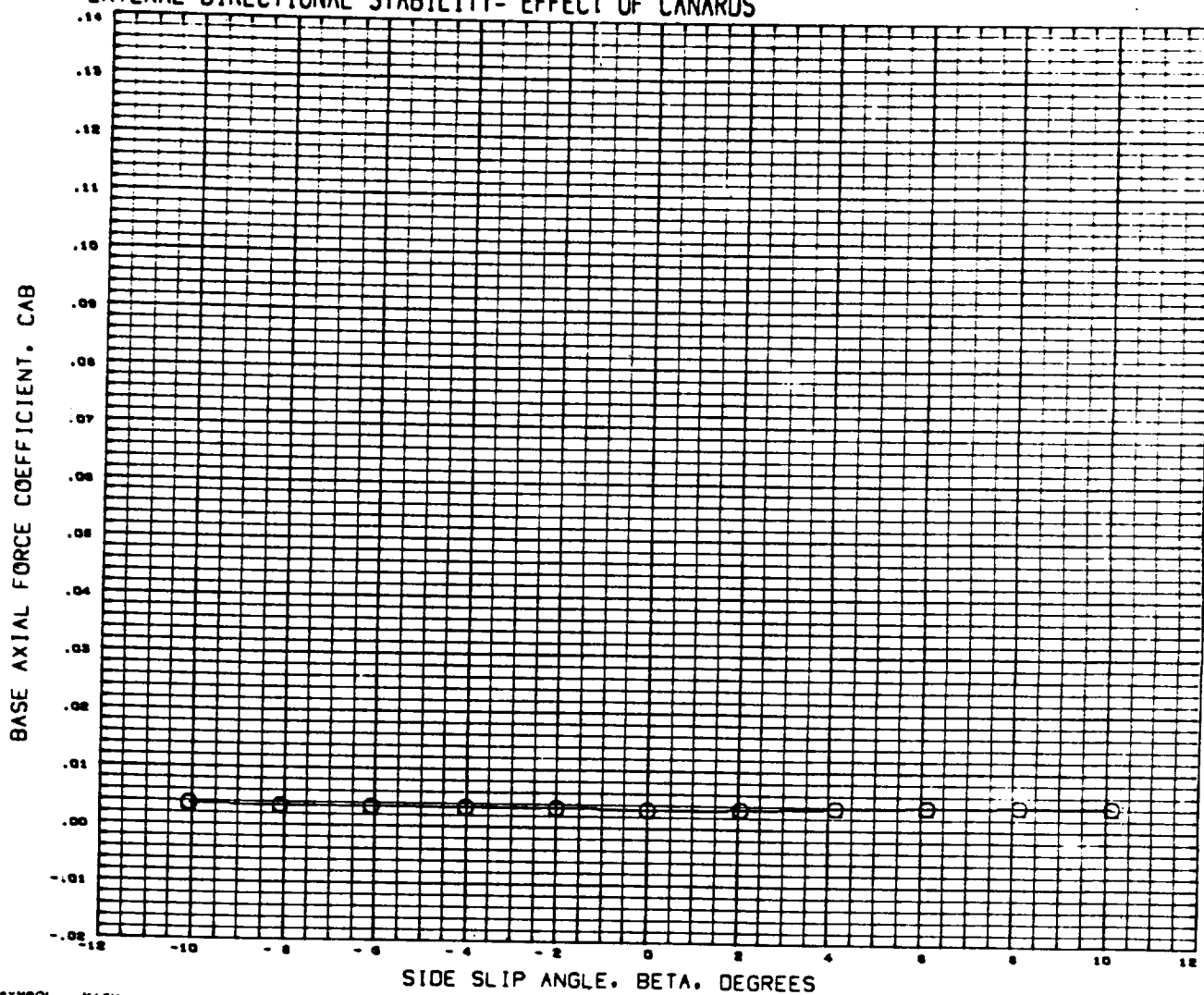
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH ALPHA PARAMETRIC VALUES
 O 4.939 30.000 CANARD - 40.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0023

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.959 ALPHA 30.000 CANARD - 40.000

DATA HIST. CODE 0E

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
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 SCALE 0.0025

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



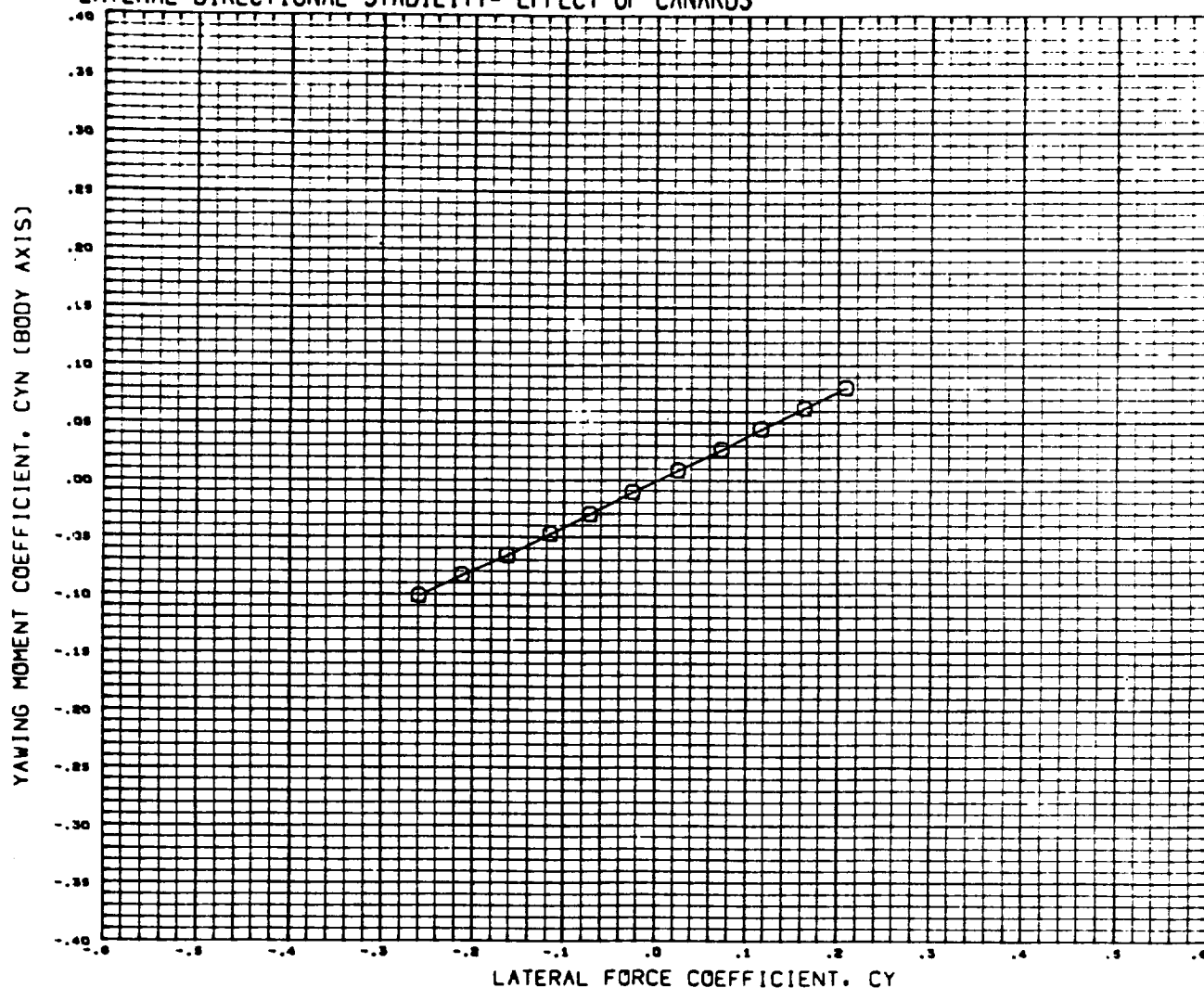
SYMBOL MACH 4.959 ALPHA 30.000 CANARD - 40.000

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 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



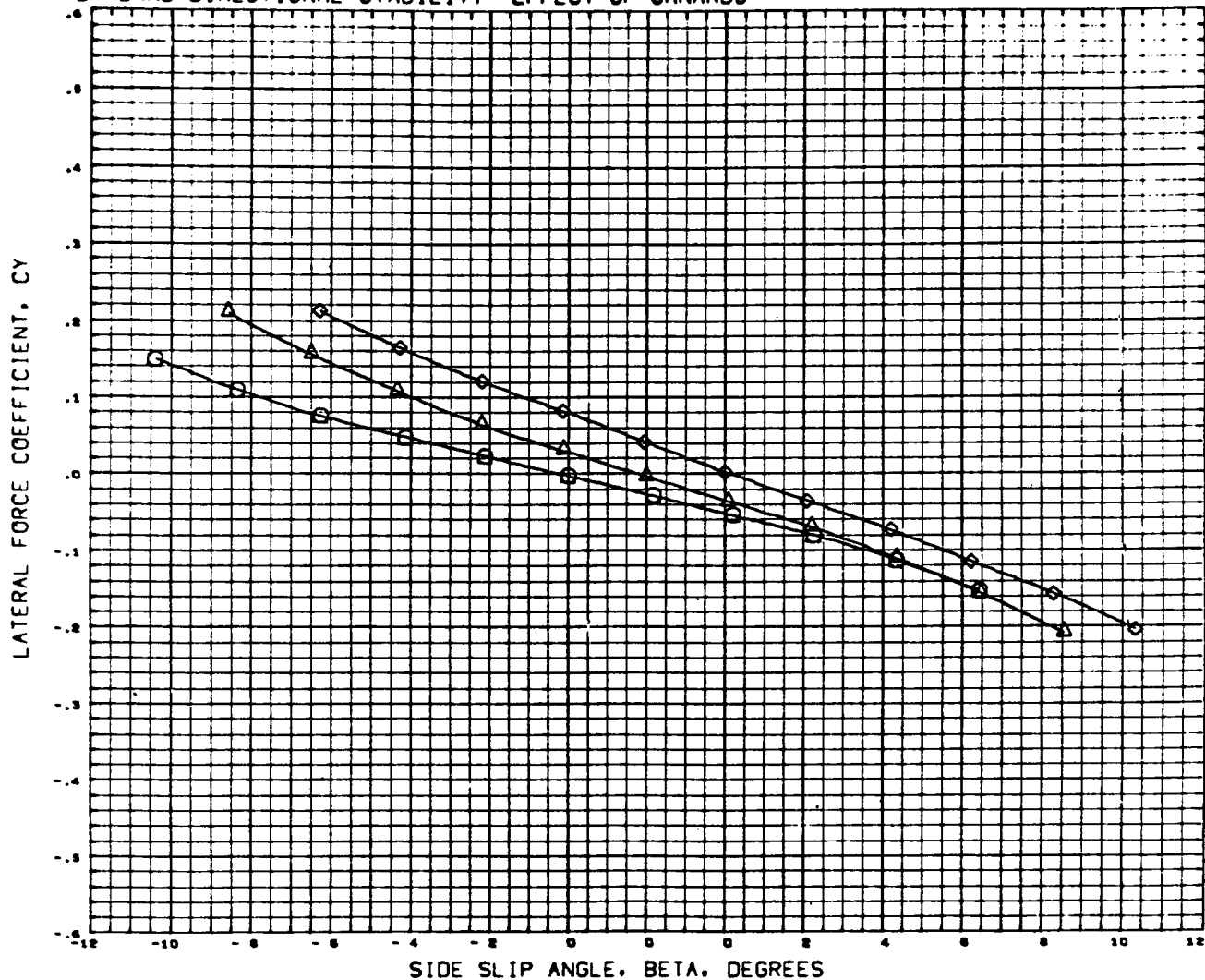
SYMBOL \bigcirc MACH 4.959 ALPHA 30.000 CANARD - 40.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

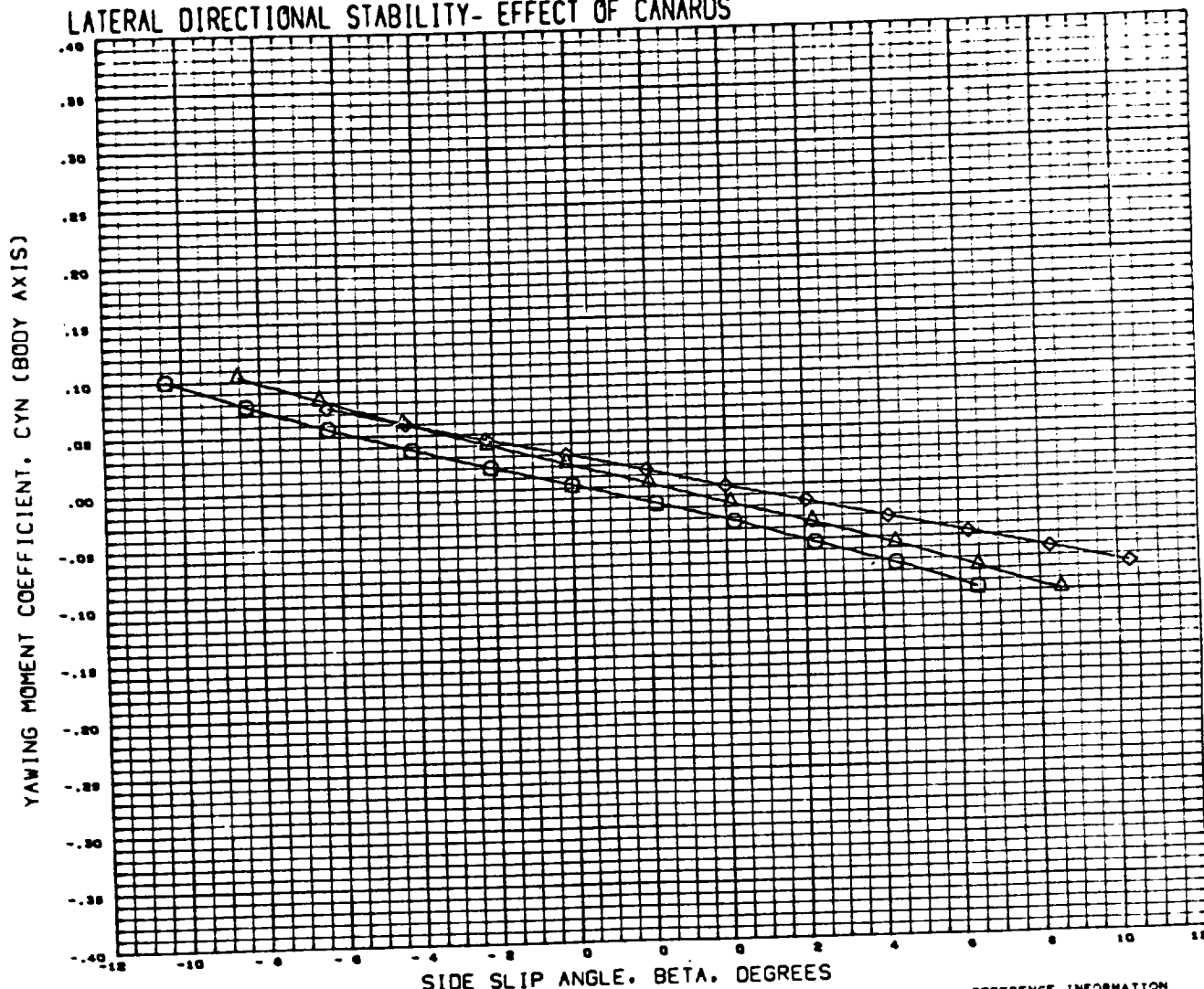


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.197	ALPHA	15.000	DEL	0.000
△	1.980	DER	0.000	ELEVTR	0.000
◇	3.480	ATLRON	0.000	CANARD	-20.000

REFERENCE INFORMATION		
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LREF	1.9360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES
○	1.197	ALPHA 15.000 DEL 0.000
△	1.960	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000 CANARD -20.000

REFERENCE INFORMATION		
SREF	4.6225	33. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

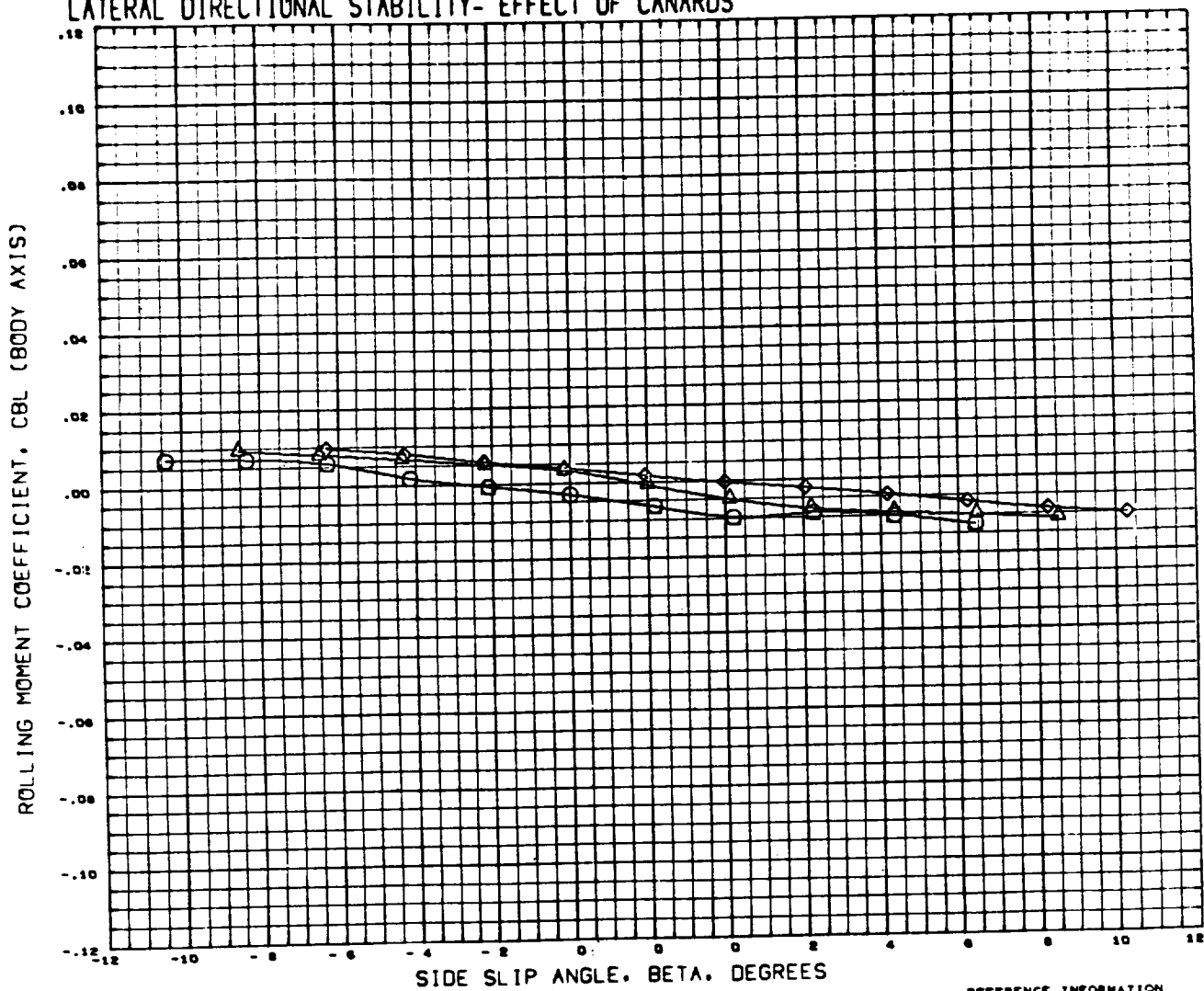
MODEL

W682C12

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES
○	1.197	ALPHA 15.000 DEL 0.000
△	1.960	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000 CANARD - 20.000

REFERENCE INFORMATION		
BREF	4.6225	sq. in.
LREF	1.5360	in.
SREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

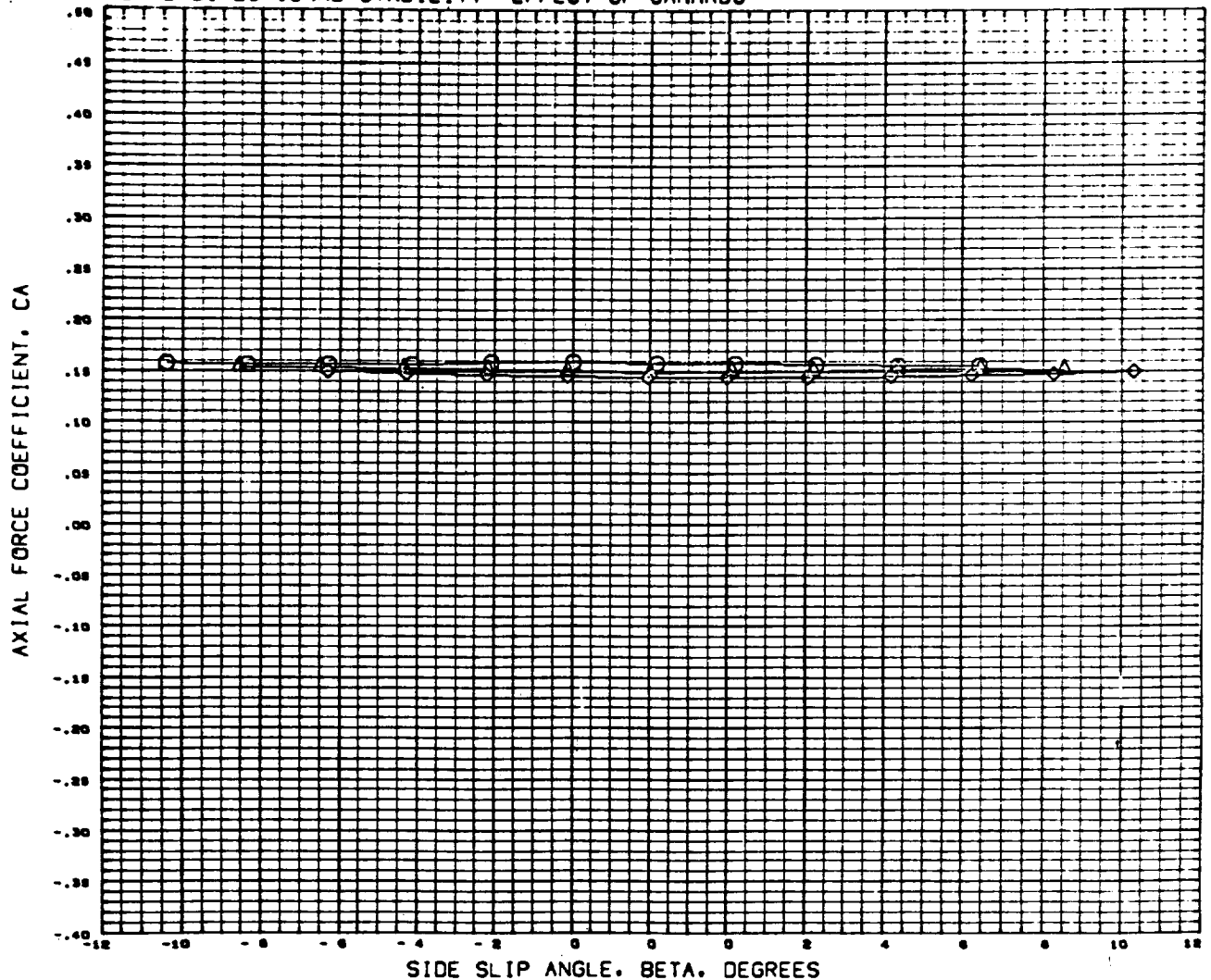
MODEL

W6B2C12

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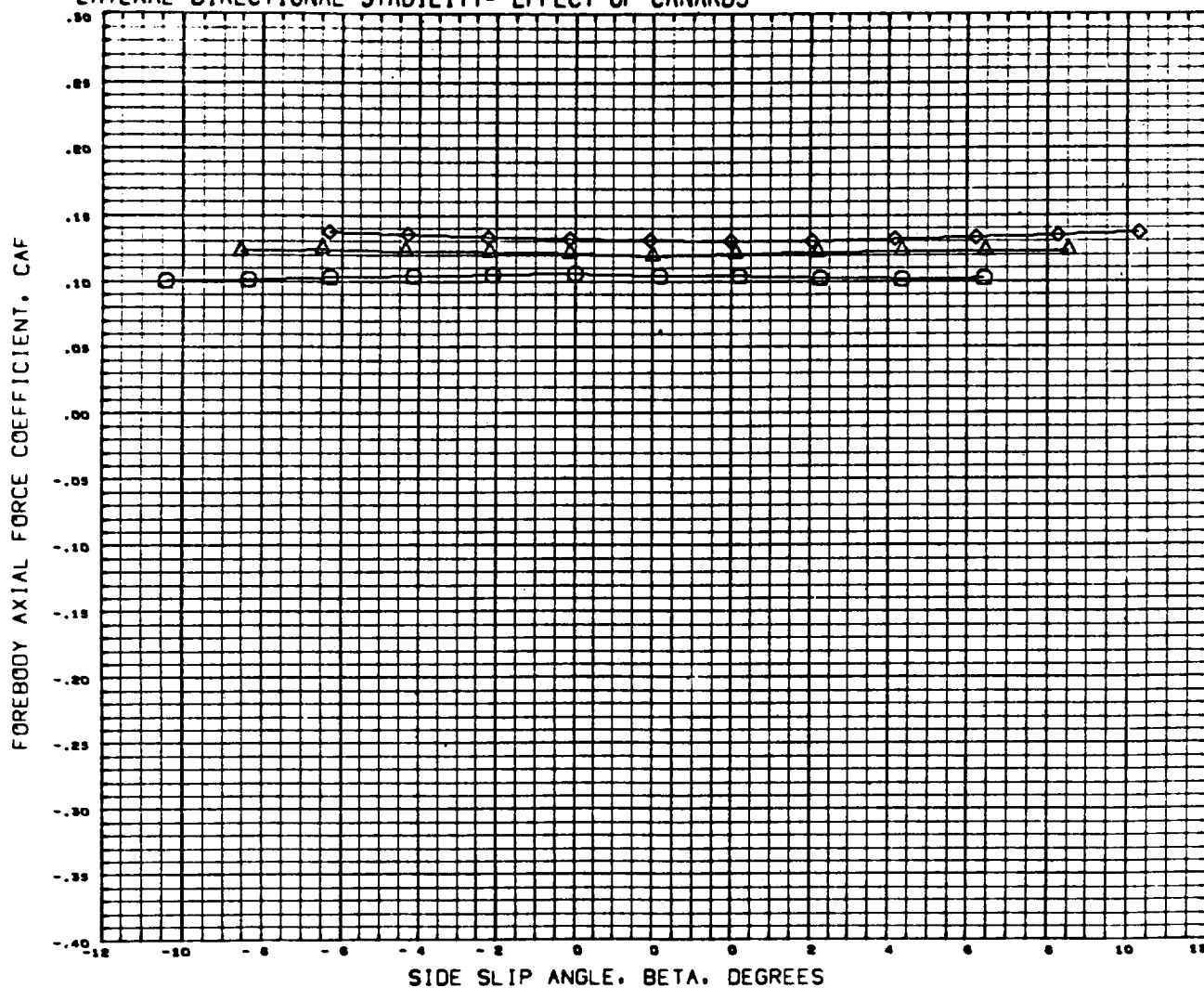
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
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○	1.960	DEP	0.000	ELEVTR	0.000		LREF	1.5360	IN.
△	3.460	ATLROM	0.000	CANARD	-20.000		BREF	4.3000	IN.
◇							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

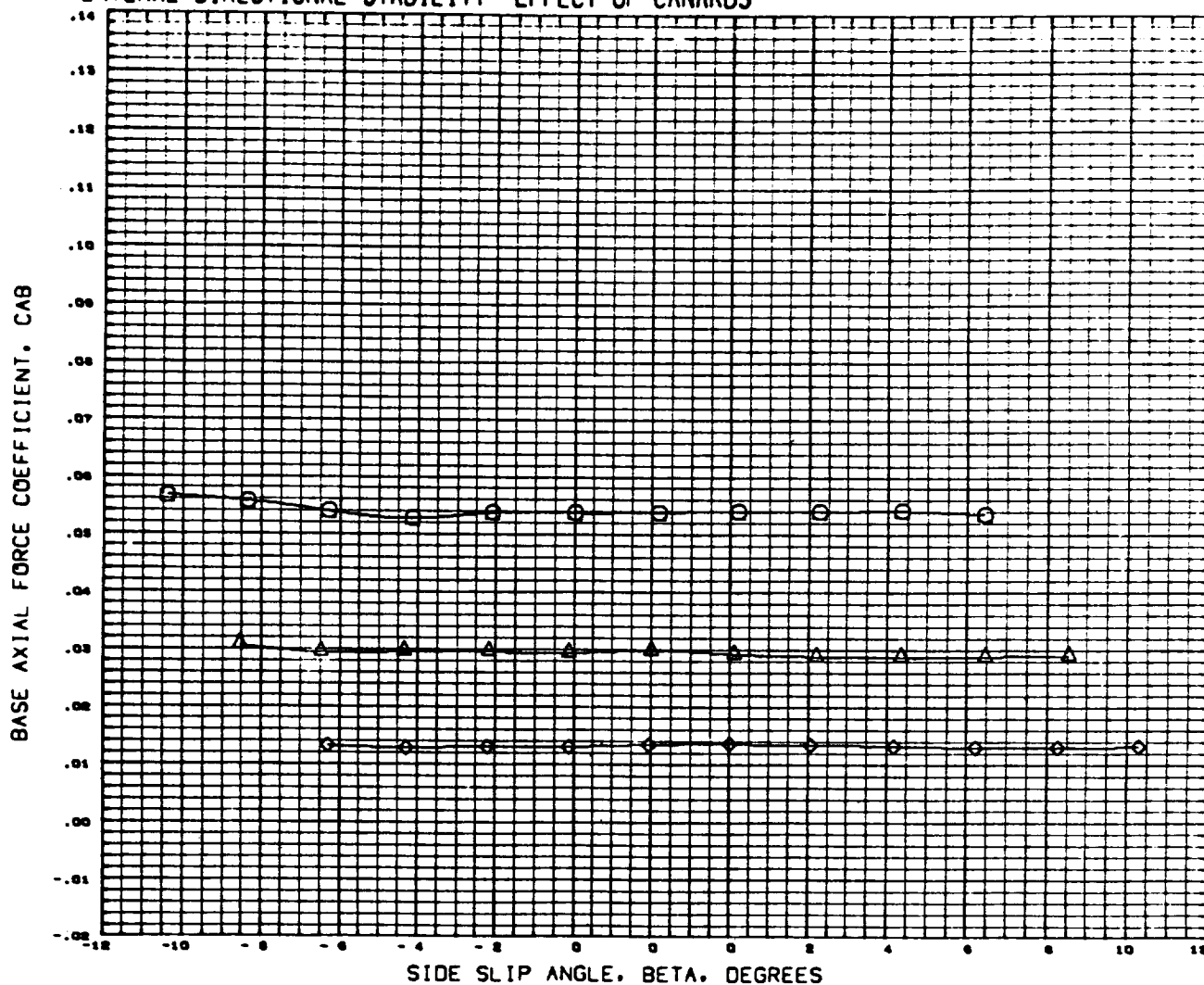
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	1.197	ALPHA	15.000	DEL	0.000	SREF	4.6225 SQ. IN.
△	1.980	DER	0.000	ELEVTR	0.000	LREF	1.9360 IN.
◇	3.490	AILRON	0.000	CANARD	-20.000	SREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



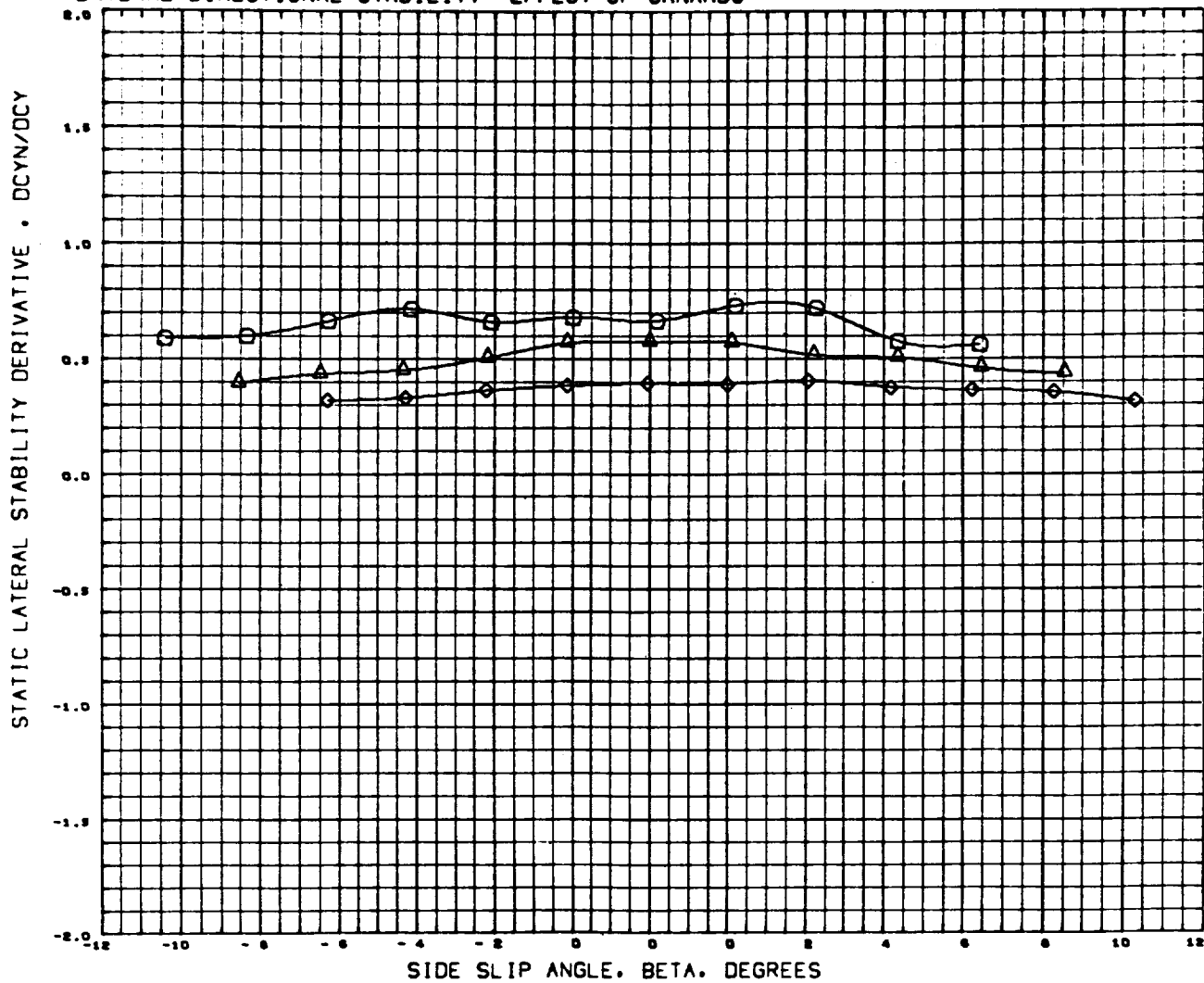
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.197	ALPHA	15.000	DEL	0.000
△	1.980	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000	CANARD	-20.000

REFERENCE INFORMATION		
SREF	4.6225	sq. in.
LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE DE

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

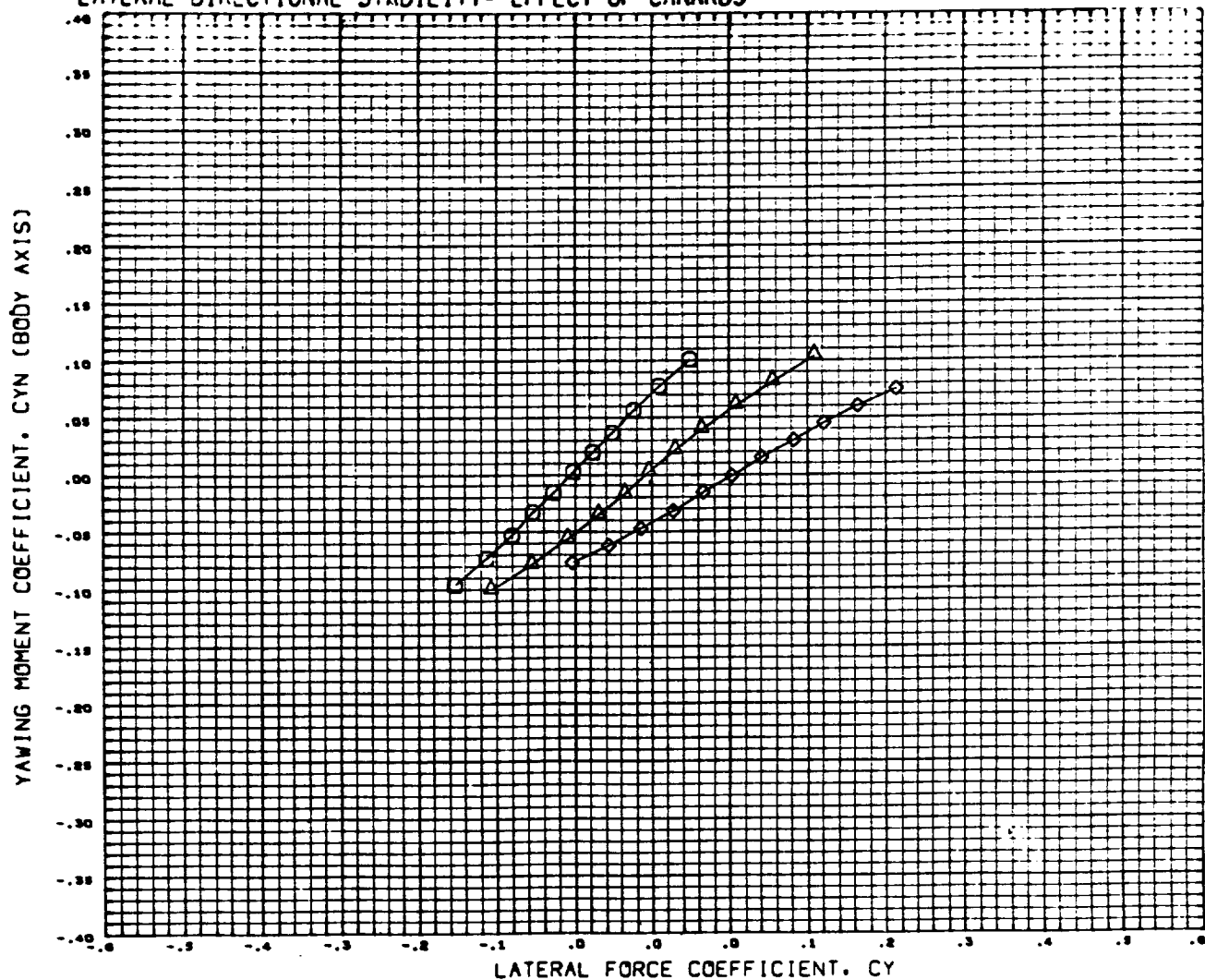


SYMBOL	MACH	PARAMETRIC VALUES			
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△	1.960	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000	CANARD	- 20.000

REFERENCE INFORMATION		
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LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
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DATA HIST. CODE *E

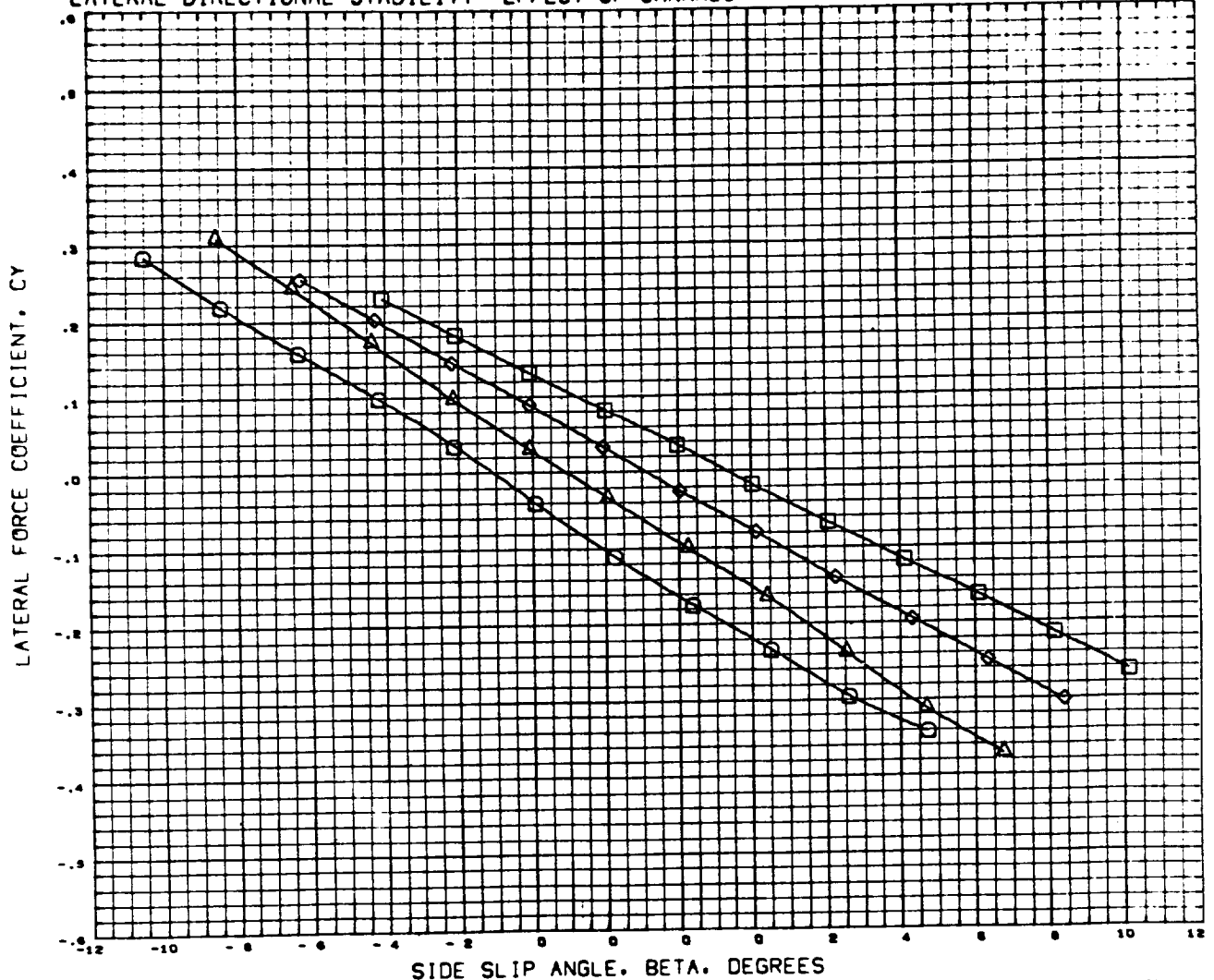
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	1.197	ALPHA	15.000	DEL	0.000	SREF	4.6225 SQ. IN.
△	1.960	DER	0.000	ELEVTR	0.000	LREF	1.5360 IN.
◇	3.460	ATLRON	0.000	CANARD	-20.000	BREF	4.3000 IN.
						ZHRP	2.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

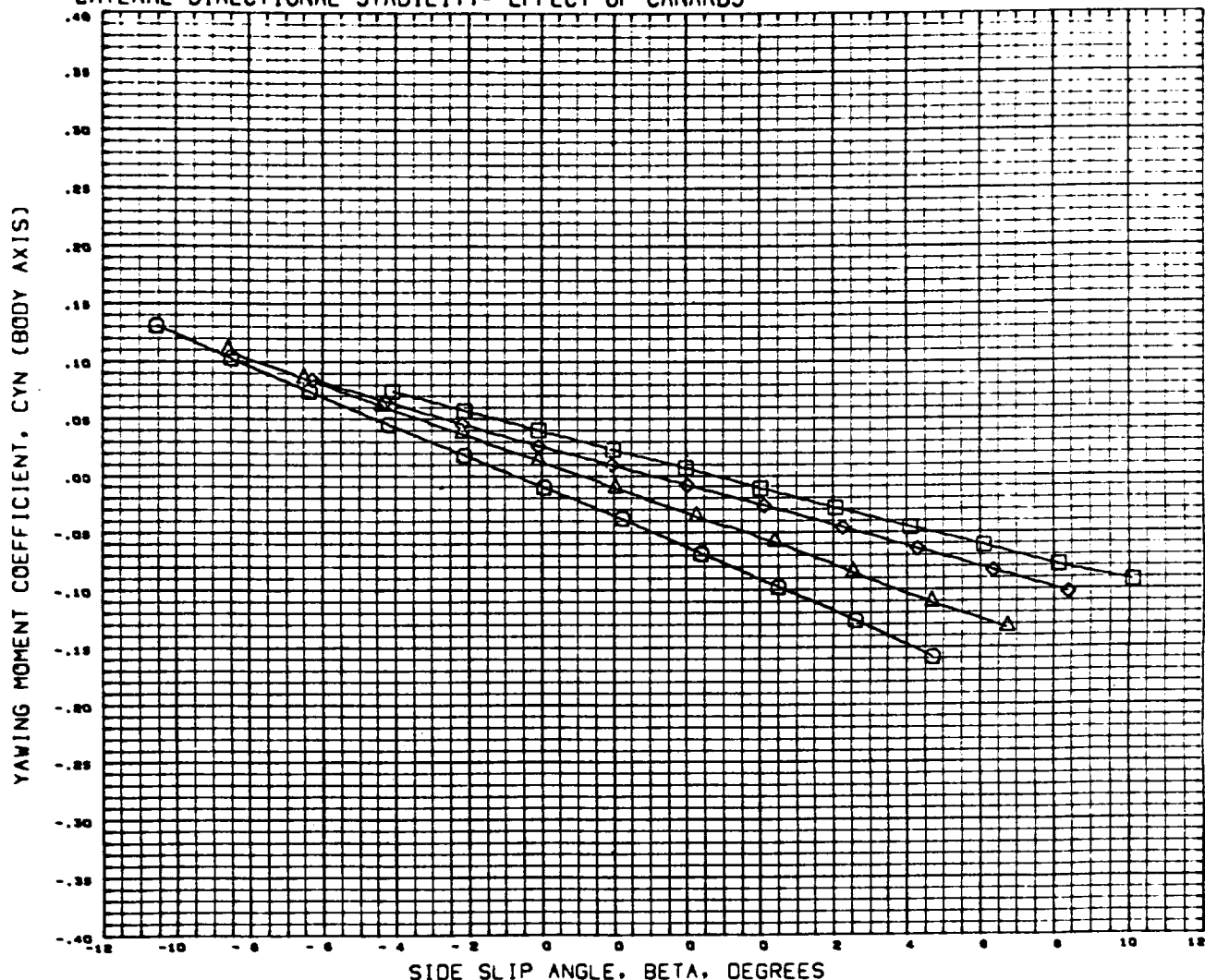
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
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△	1.950	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	3.460	AILRON 0.000 CANARD - 40.000	SREF 4.3000 IN.
□	4.959		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

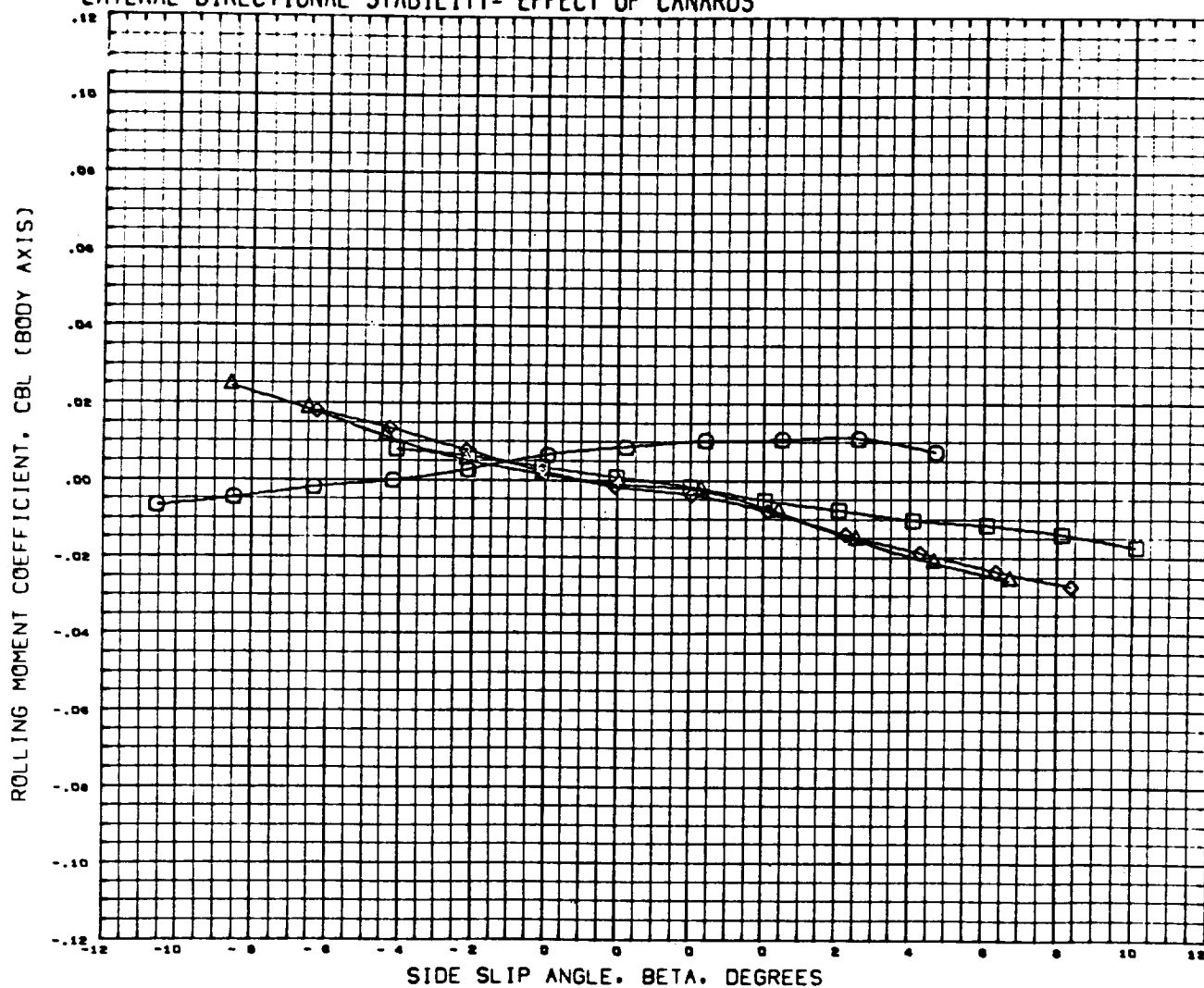
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	1.195	30.000	0.000	0.000		4.6225	1.5360	2.4000
△	1.950	0.000	0.000	0.000		4.3000	1.5360	2.4000
◇	3.480	0.000	0.000	0.000		2.4000	1.5360	2.4000
□	4.959	0.000	0.000	0.000	-40.000	0.0000	1.5360	2.4000

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

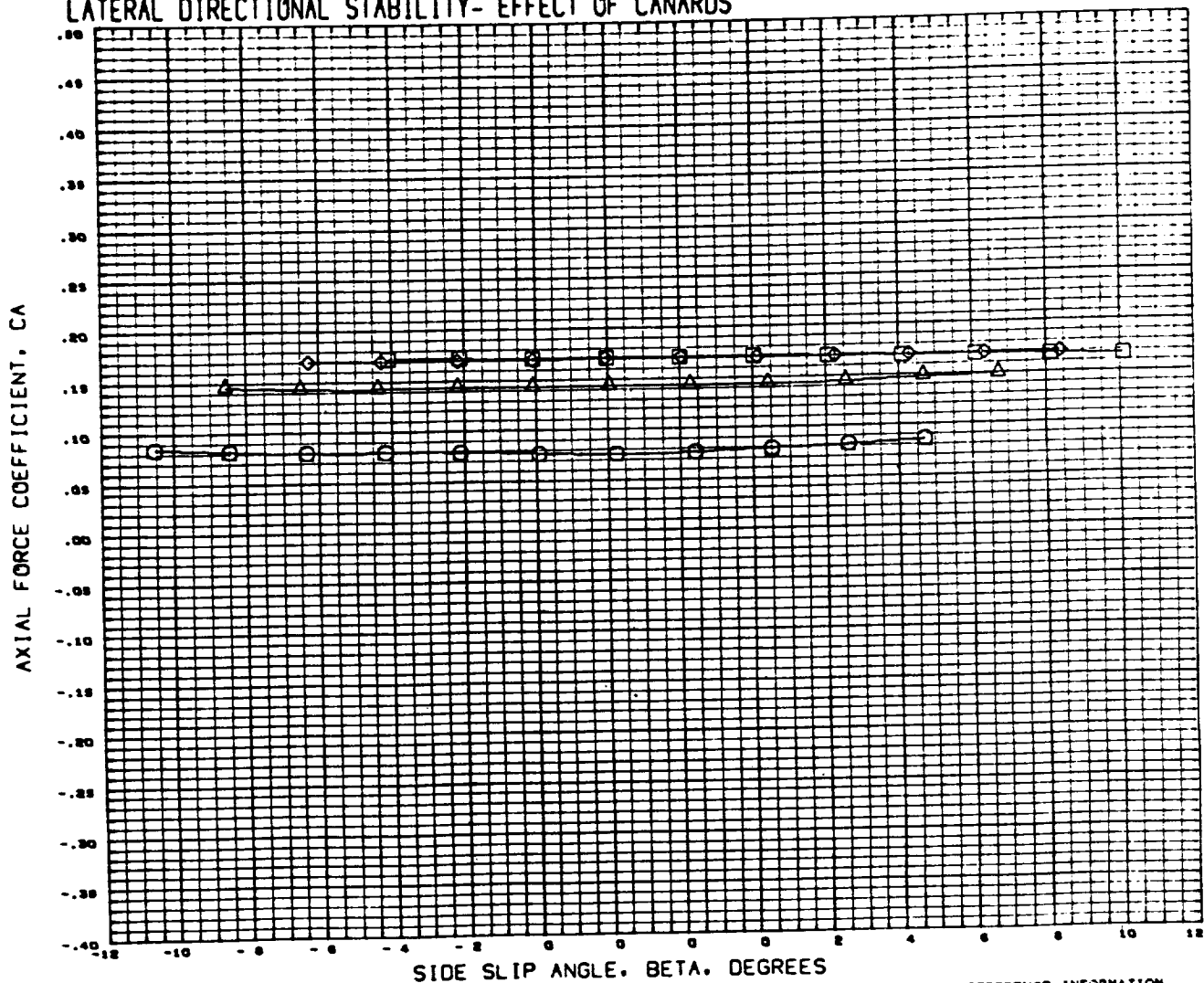


SYMBOL ○ □ ◇ △	MACH	PARAMETRIC VALUES			
	1.195	ALPHA	30.000	DEL	0.000
	1.950	DER	0.000	ELEVTR	0.000
	3.480	ATLON	0.000	CANARD	- 40.000
	4.959				

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
ZMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES			
		ALPHA	DEL	ELEVTR	CANARD
○	1.195	30.000	0.000	0.000	-40.000
△	1.990	0.000	0.000	0.000	
◇	3.490	0.000	0.000	0.000	
□	4.990				

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 0E

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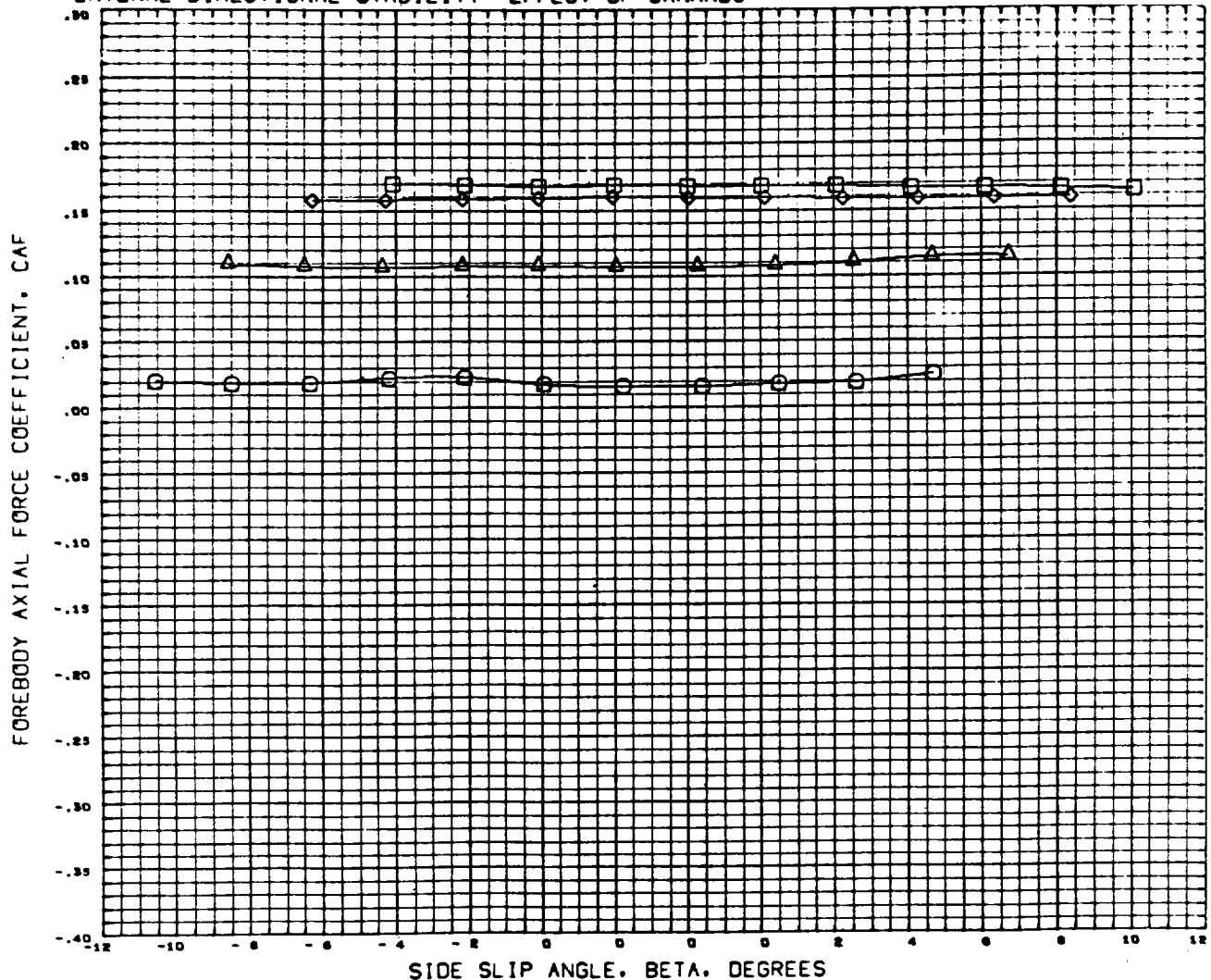
MODEL

W682C12

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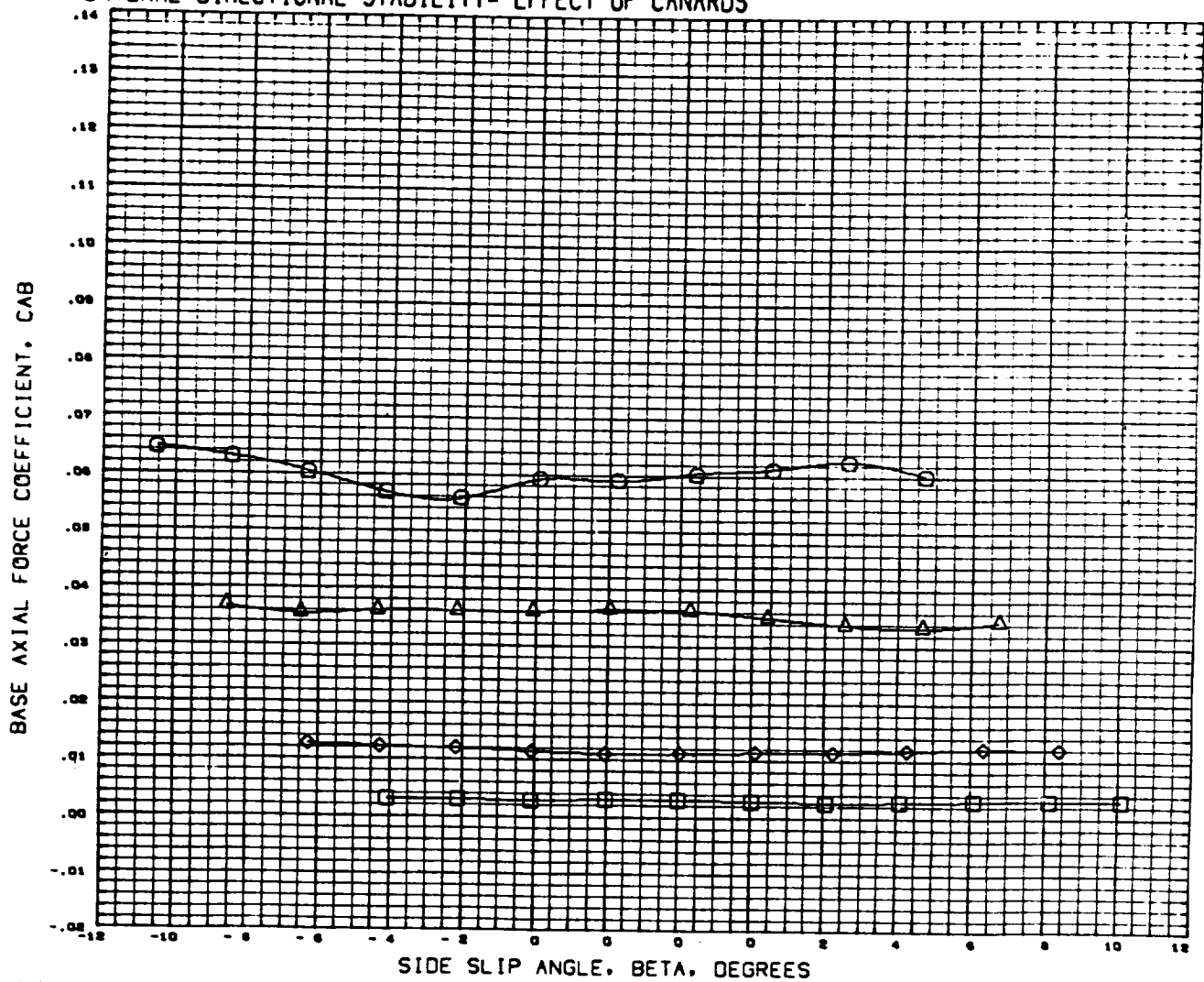
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.195	ALPHA 30.000 DEL 0.000	BREF 4.6225 SQ. IN.
△	1.950	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	3.480	AILRON 0.000 CANARD - 40.000	BREF 4.3000 IN.
□	4.959		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

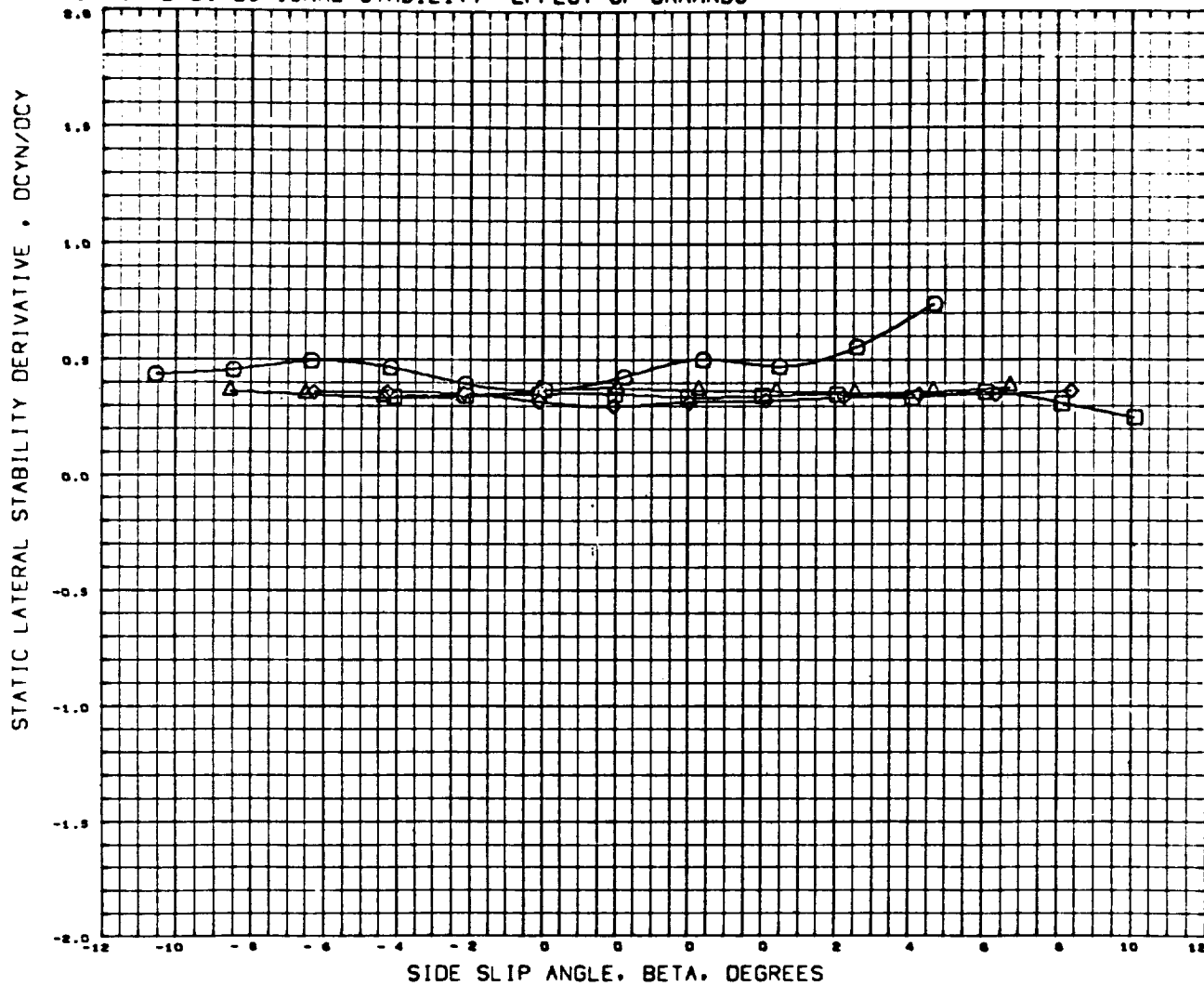


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.199	ALPHA	30.000	DEL	0.000
△	1.990	DER	0.000	ELEVTR	0.000
◇	3.400	AILRON	0.000	CANARD	-40.000
□	4.999				

REFERENCE INFORMATION		
SREF	4.8225	SQ. IN.
LREF	1.5340	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

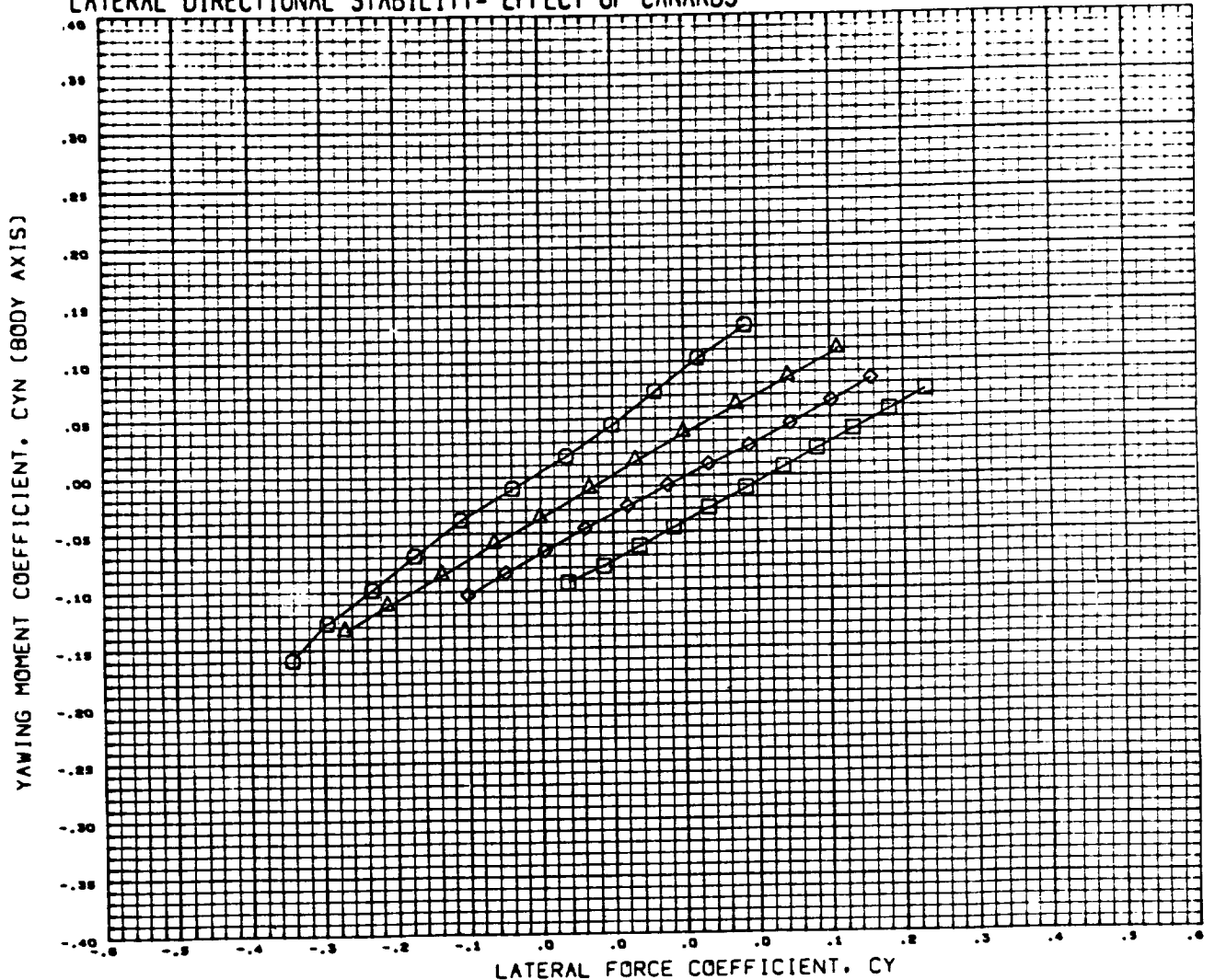
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	BREF	IN.
○	1.195	30.000	0.000	0.000		1.9360	IN.
△	1.950	0.000	0.000	0.000		4.3000	IN.
◇	3.480	0.000	0.000	0.000		2.4000	IN.
□	4.939	0.000	0.000	0.000	- 40.000	0.0000	IN.
						0.0000	IN.
						0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



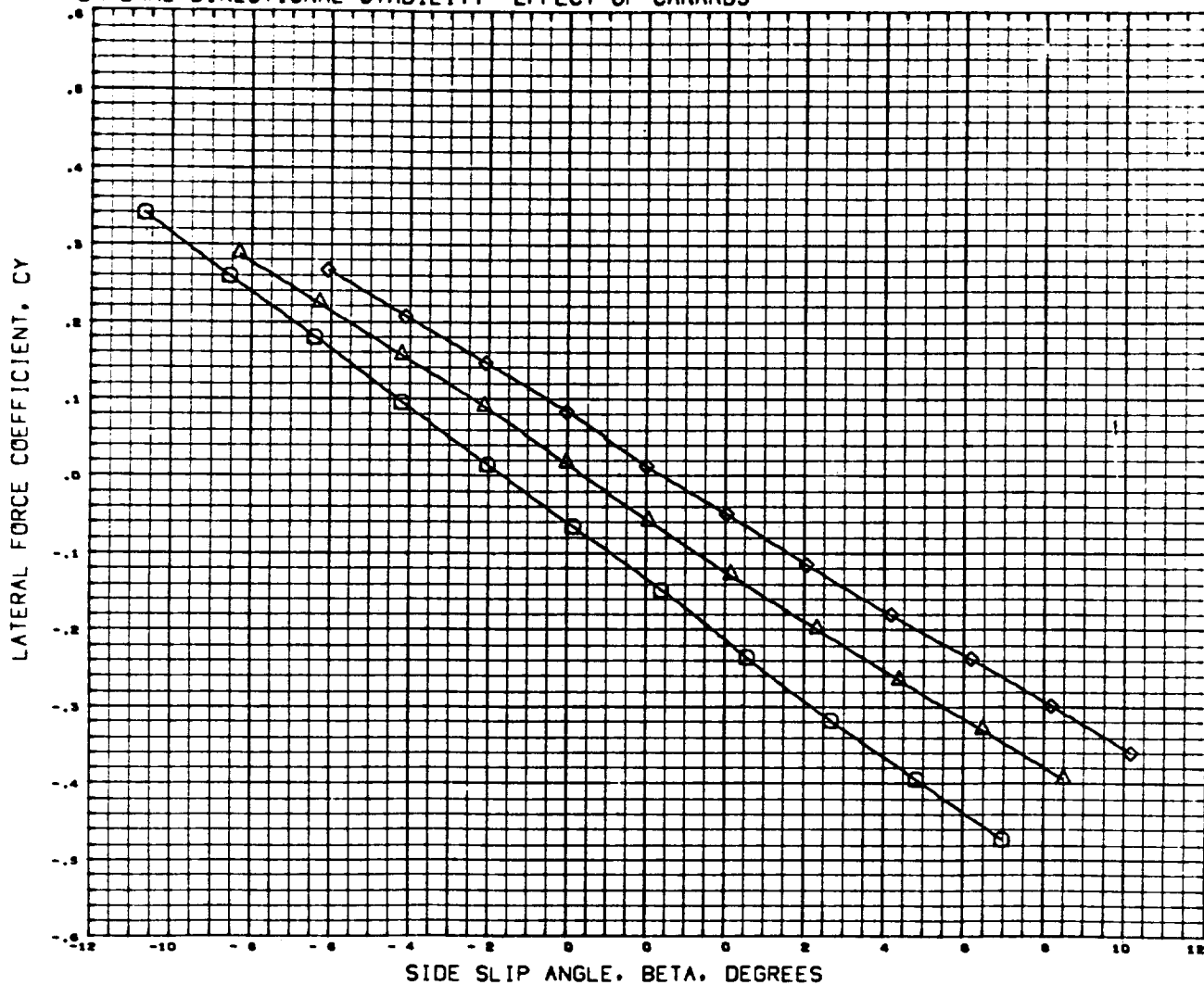
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○	1.195	ALPHA 30.000 DEL 0.000
△	1.930	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000 CANARD - 40.000
□	4.939	

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

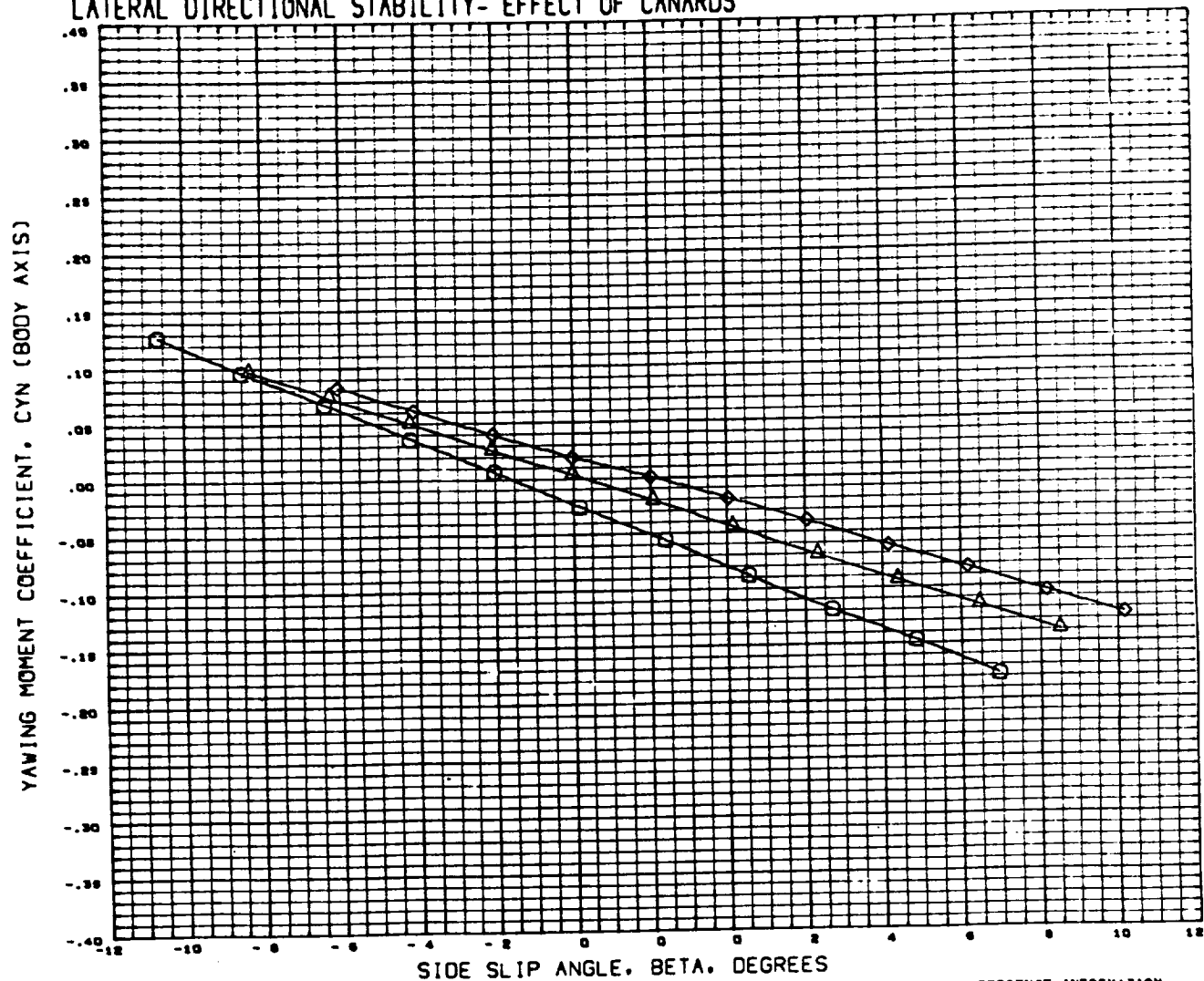


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.949	ALPHA	80.000	DEL	0.000
△	3.480	DER	0.000	ELEVTR	0.000
◇	4.959	ATLRON	0.000	CANARD	-80.000

REFERENCE INFORMATION		
BREF	4.6225	80. IN.
LREF	1.9360	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	0.000
○	1.949	0.000	0.000	0.000	0.000
△	3.480	0.000	0.000	0.000	0.000
◇	4.999	0.000	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	4.6223	SQ. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0029	

DATA HIST. CODE *E

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MODEL

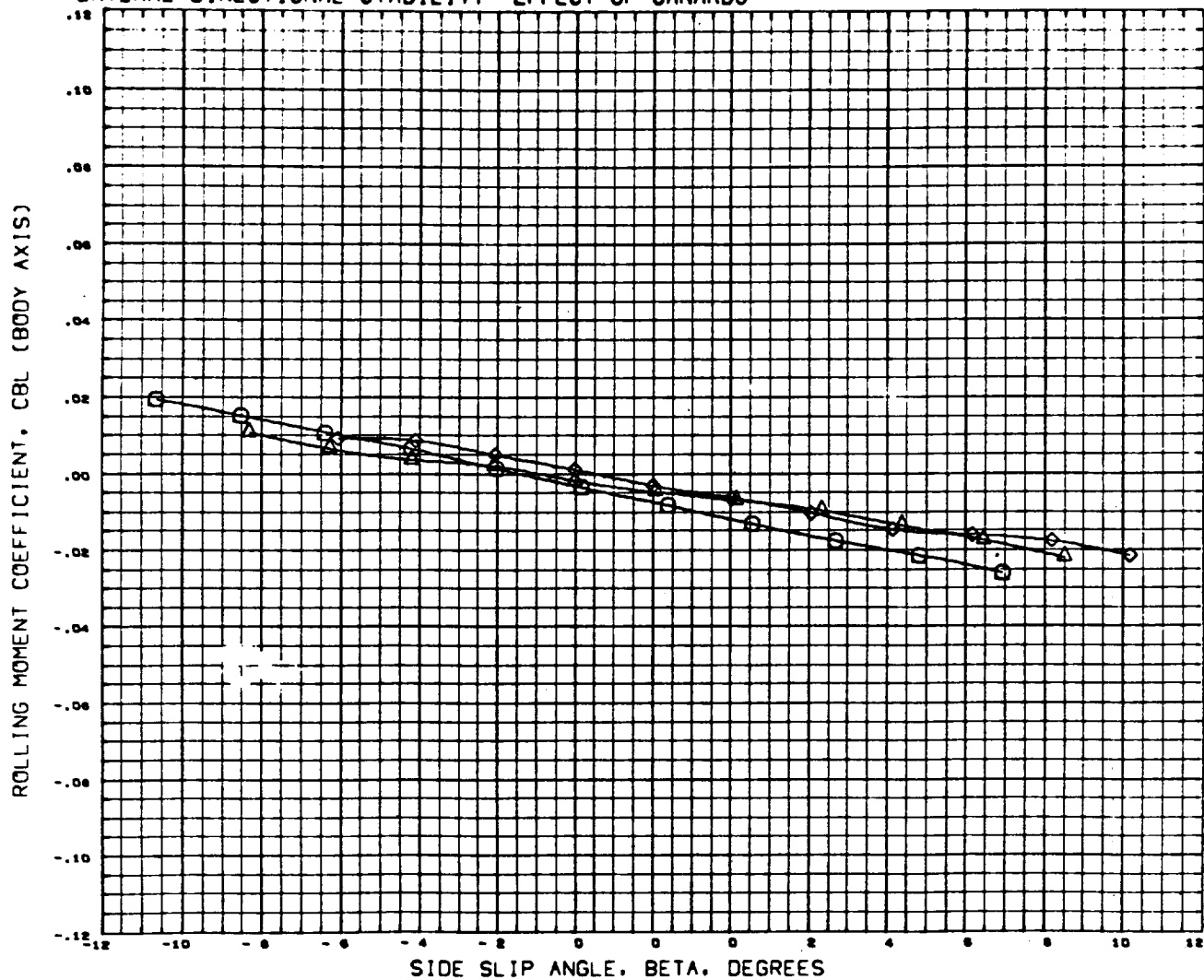
W6B2C12

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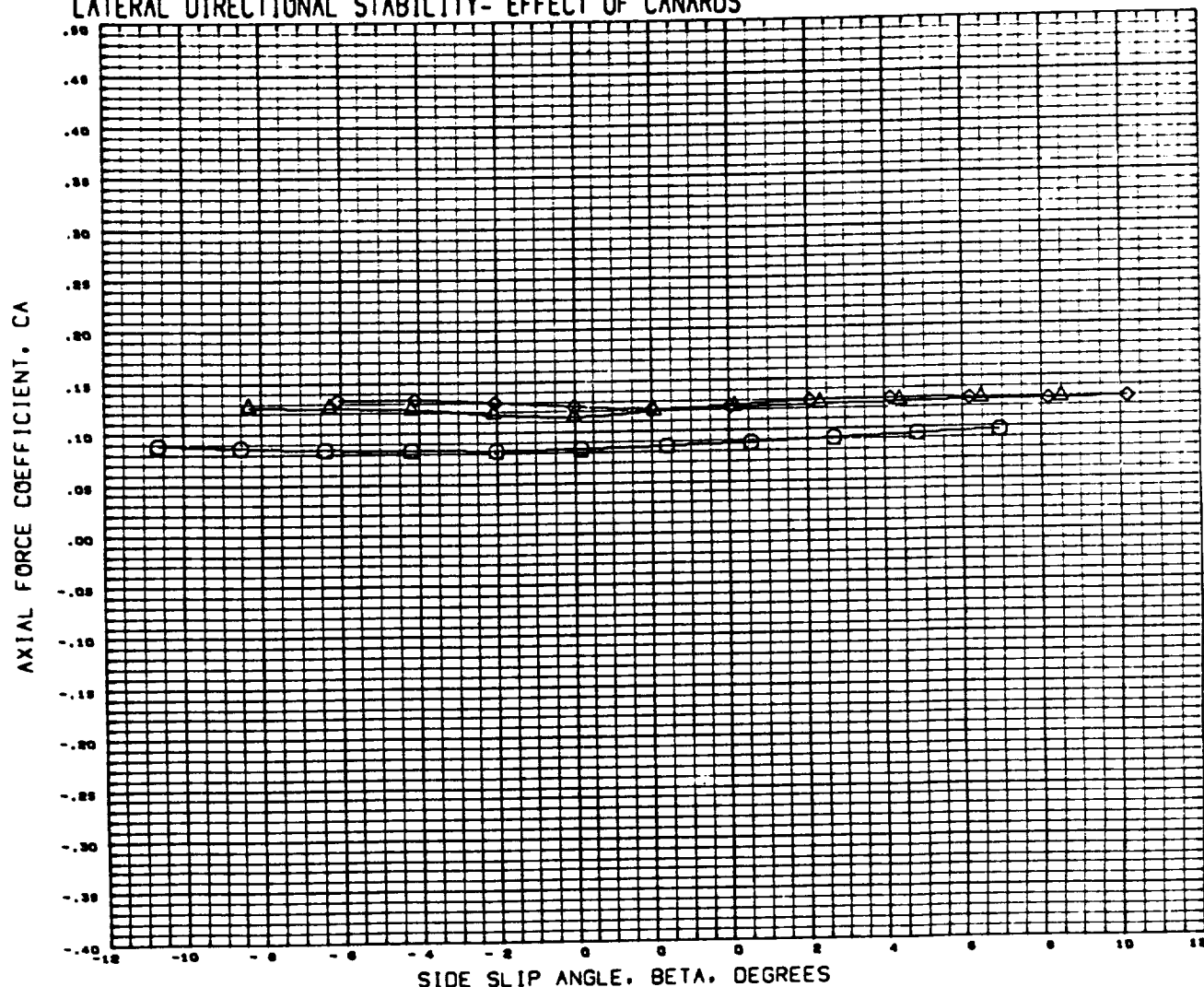
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.949	ALPHA 50.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	3.480	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	4.959	AIRLON 0.000 CANARD - 80.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.949	ALPHA 10.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	3.480	DER 0.000 ELEVTR 0.000	LREF 1.5380 IN.
◇	4.959	ATLRON 0.000 CANARD - 60.000	BREF 4.3000 IN.
			XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

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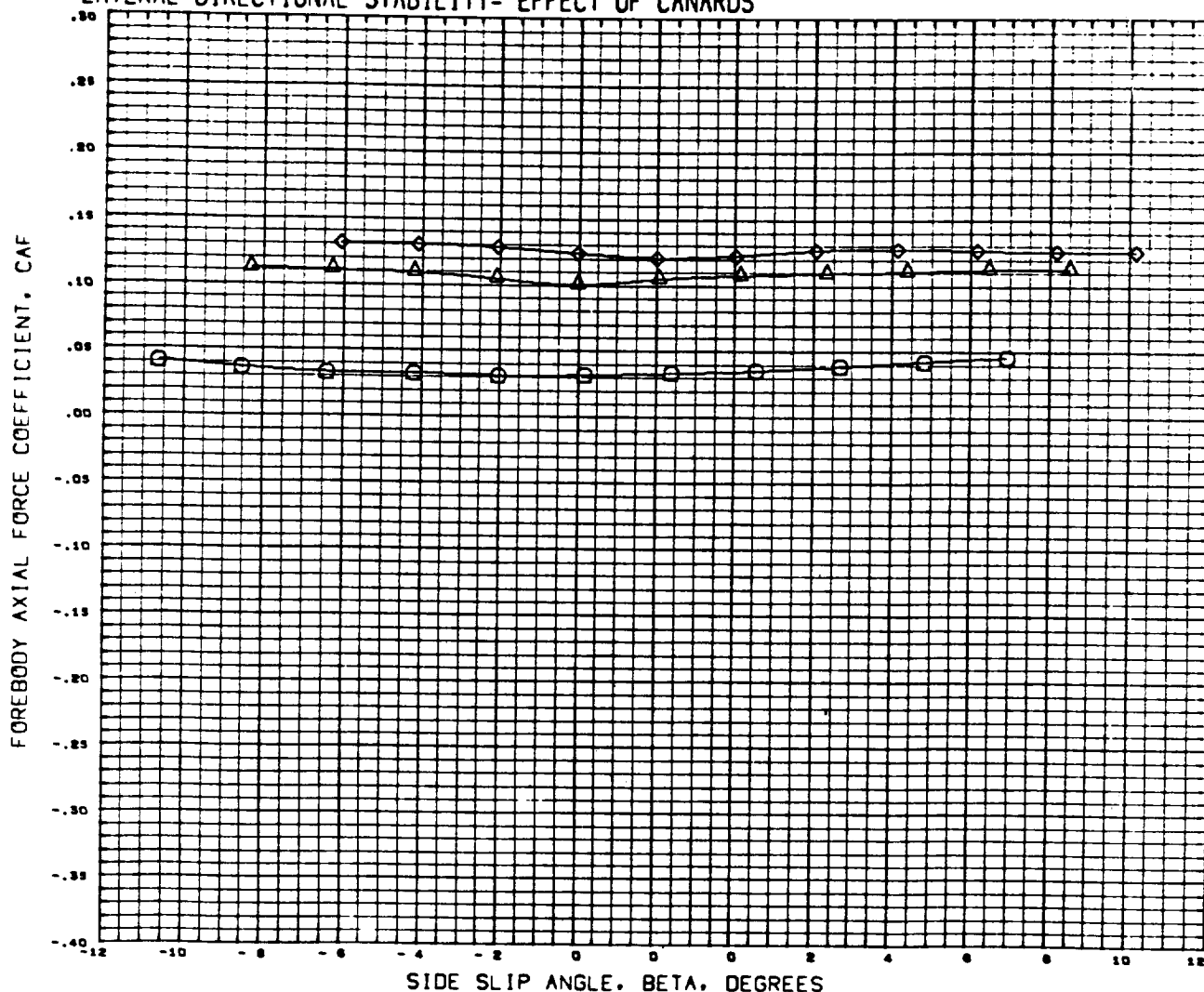
MODEL

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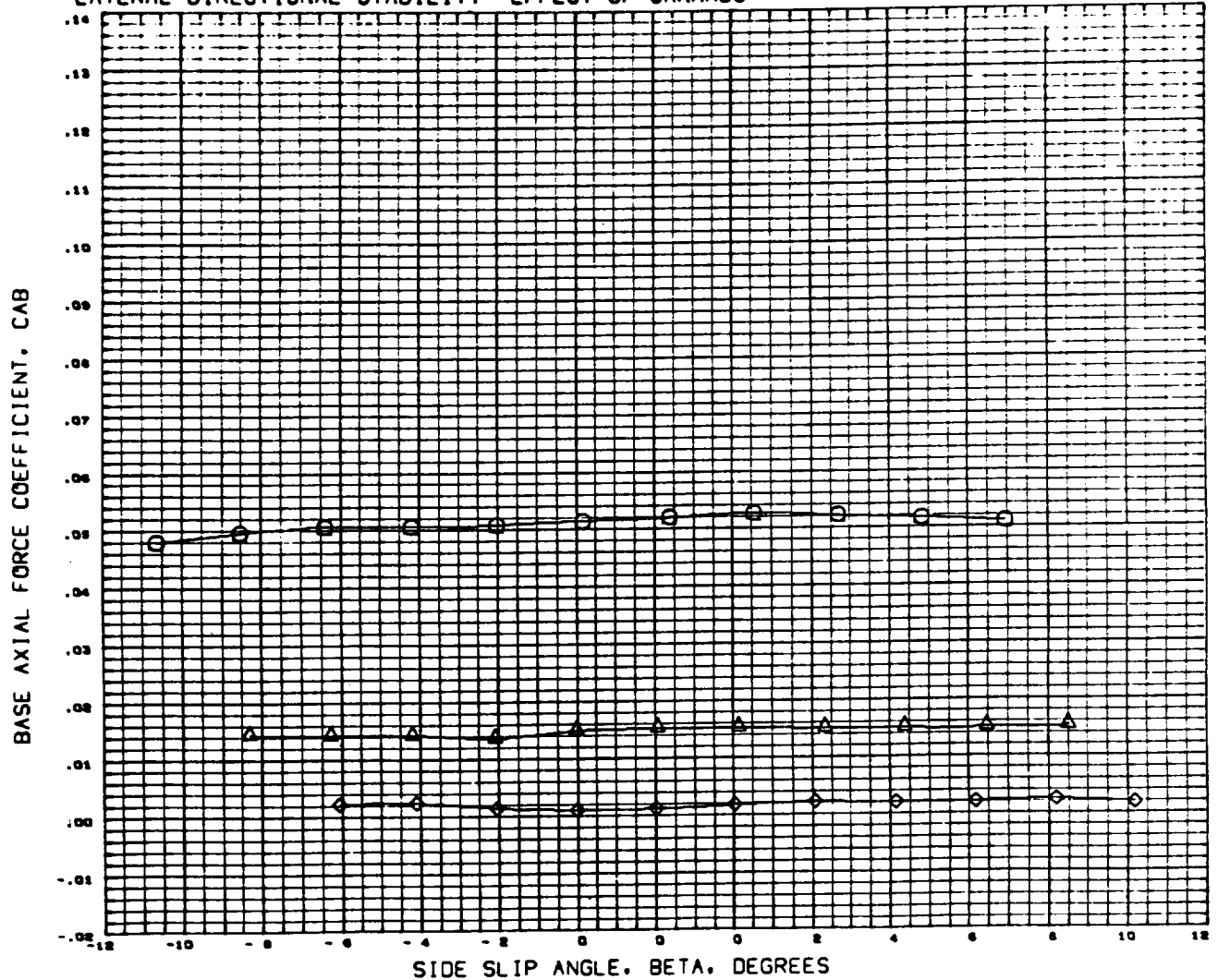
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.949	ALPHA	90.000	DEL	0.000	BREF	4.6225	1.50 IN.
△	3.480	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	4.959	ATLRON	0.000	CANARD	- 90.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

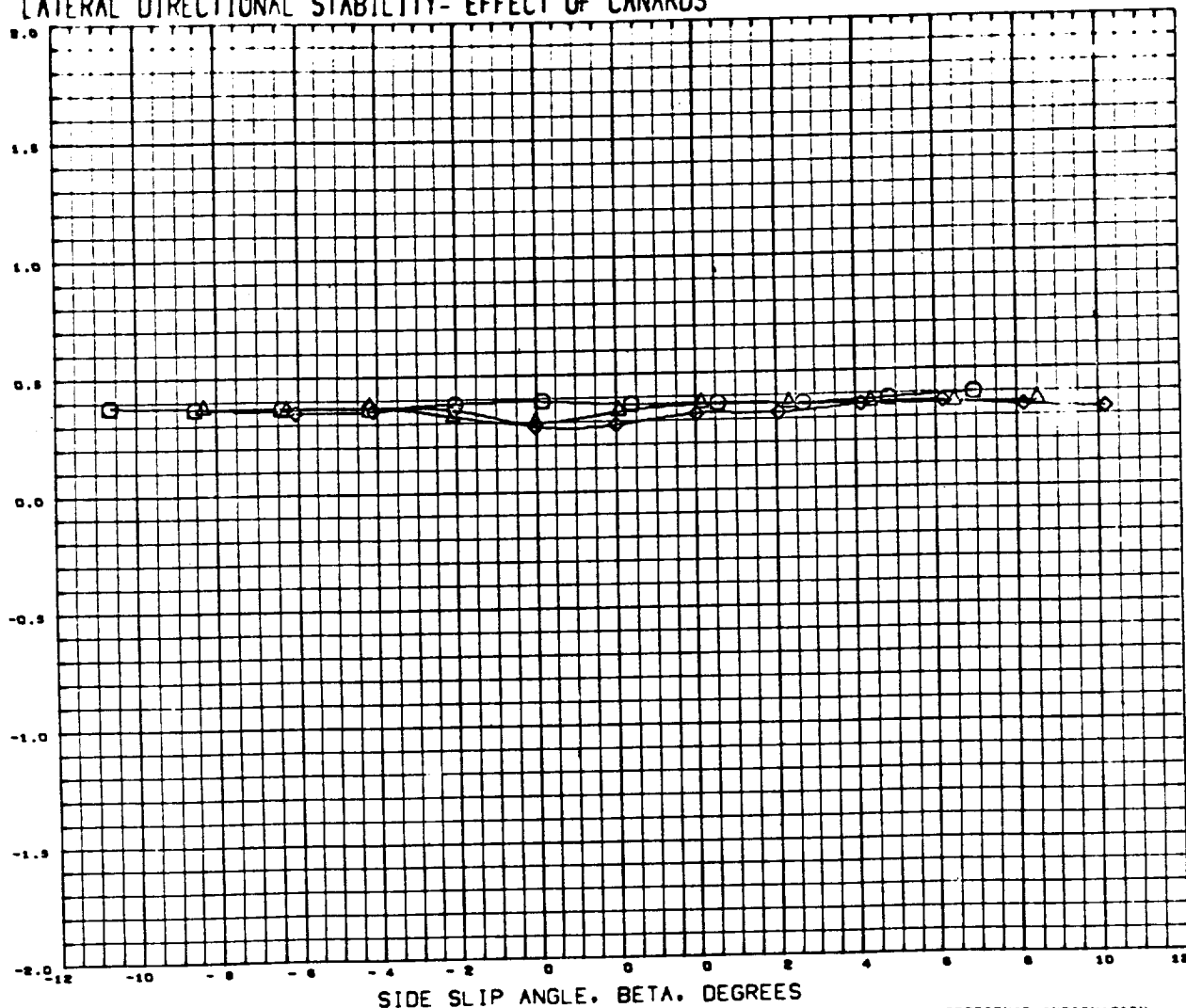


SYMBOL	PARAMETRIC VALUES				REFERENCE INFORMATION		
	MACH	ALPHA	DEL	0.000	SREP	4.6225	50. IN.
○	1.949	DER	0.000	ELEVTR	0.000	LREF	1.9360 IN.
△	3.480	AILRON	0.000	CANARD	- 60.000	BREF	4.3000 IN.
◇	4.959					XNRP	2.4000 IN.
						YNRP	0.0000 IN.
						ZNRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SYMBOL ○ △ ◇	MACH	PARAMETRIC VALUES			
	1.949	ALPHA	50.000	DEL	0.000
	3.480	DER	0.000	ELEVTR	0.000
	4.959	ATLRON	0.000	CANARD	- 50.000

REFERENCE INFORMATION		
SREF	4.6225	sq. in.
LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

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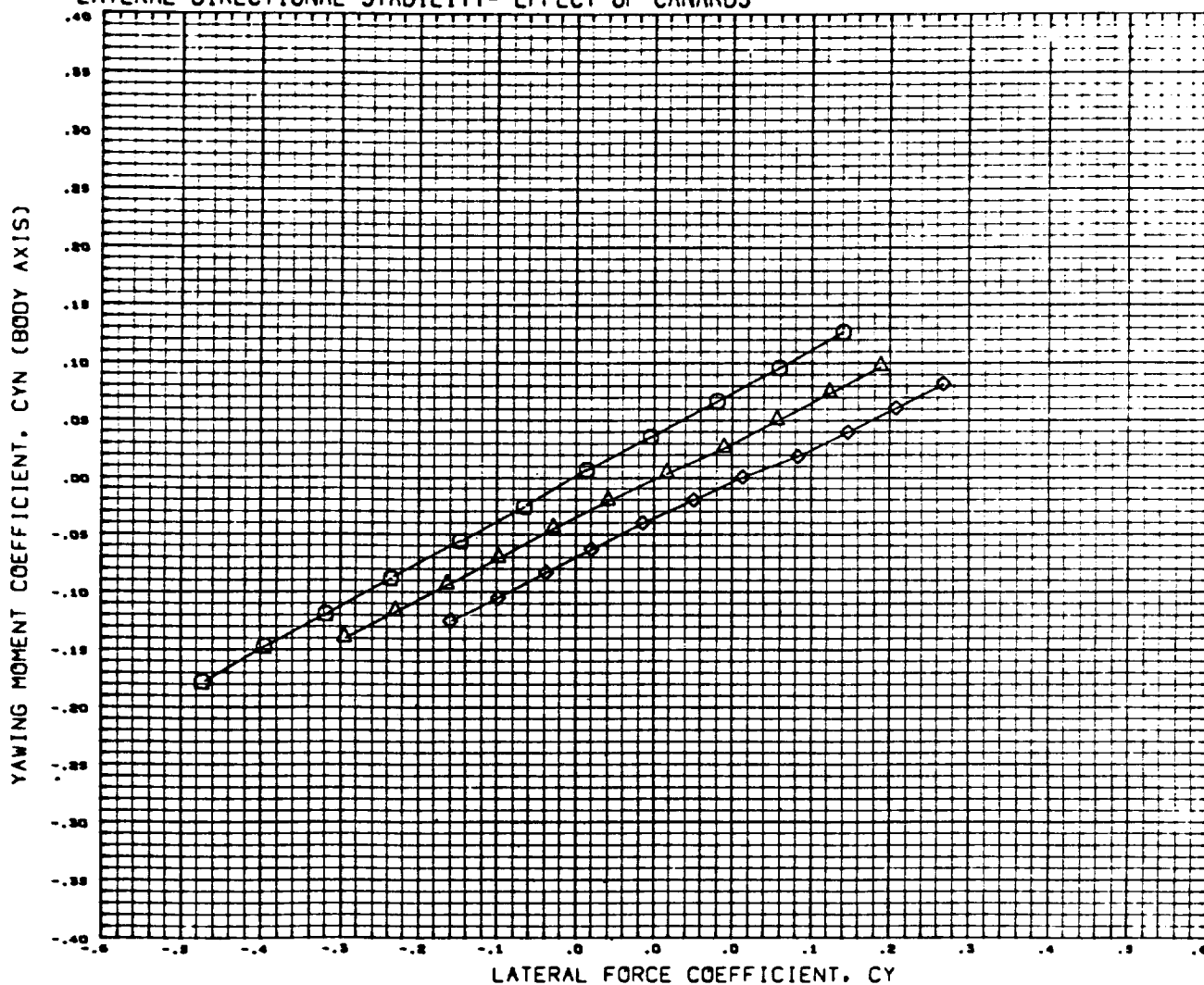
MODEL

W6B2C12

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES			
○	1.949	ALPHA	50.000	DEL	0.000
△	3.480	DER	0.000	ELEVTR	0.000
◇	4.959	ATLRON	0.000	CANARD	- 80.000

REFERENCE INFORMATION		
SREF	4.6225	53. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 4E

M496-MSFC

AR11981-3

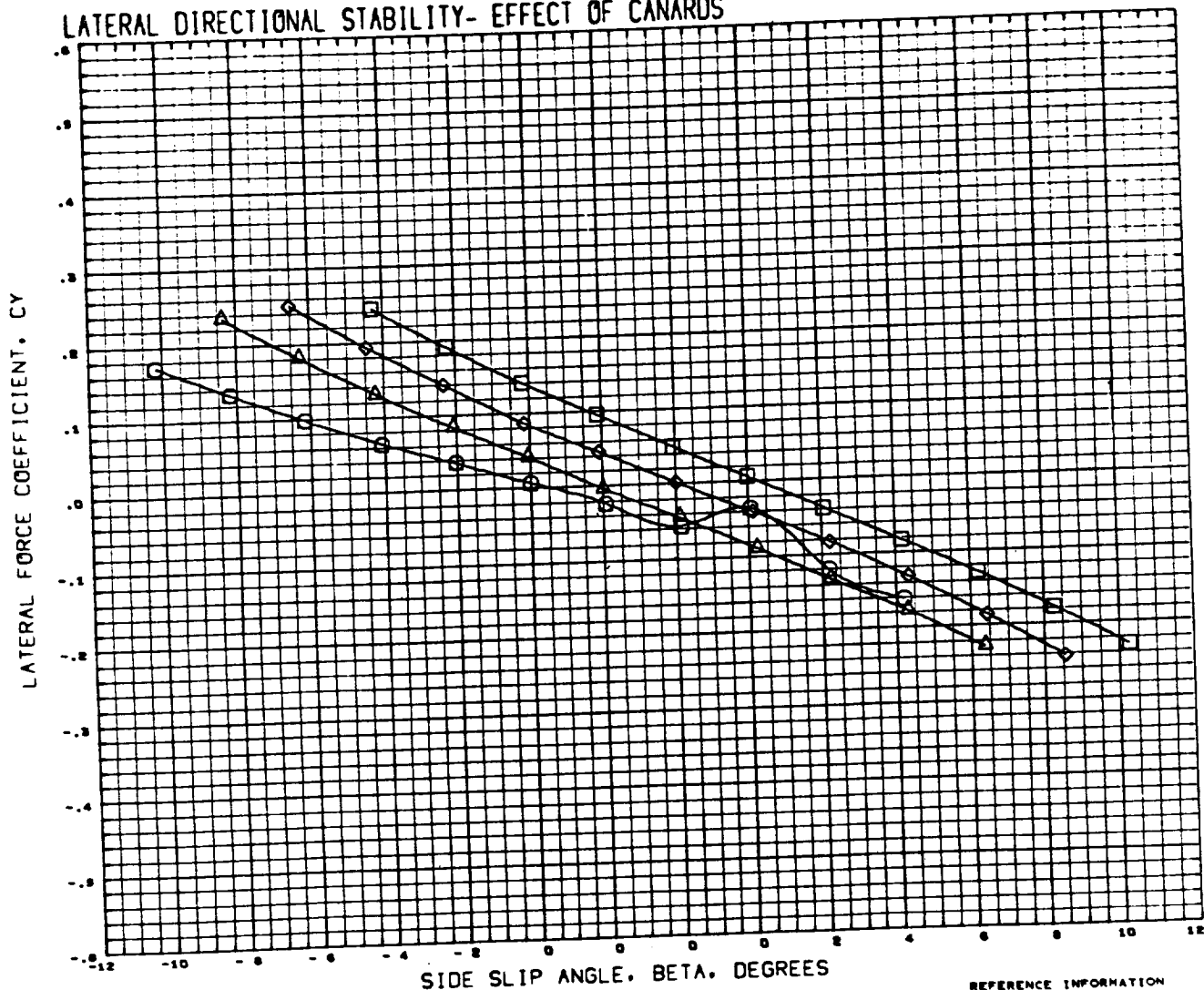
MODEL

W6B2C12

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES
○	0.598	ALPHA 15.000 DEL 0.000
△	1.199	DER 0.000 ELEVTR 0.000
□	1.995	ATLRON 0.000 CANARD -20.000
◇	3.480	

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

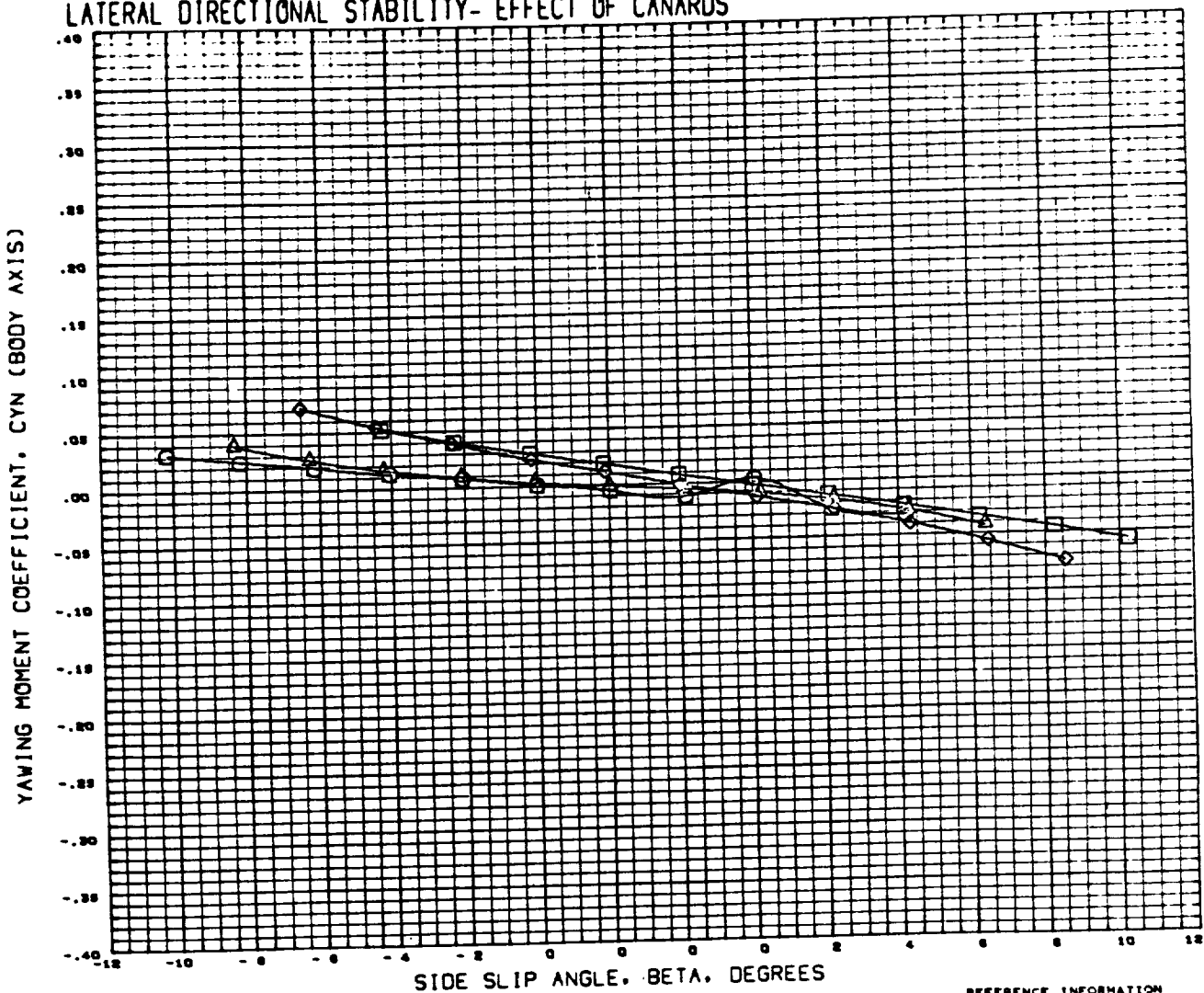
MODEL

W6B2C12V2

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES			
○	0.998	ALPHA	15.000	DEL	0.000
◇	1.198	DER	0.000	ELEVTR	0.000
△	1.999	ATLRON	0.000	CANARD	-20.000
□	3.460				

REFERENCE INFORMATION		
SREF	4.6225	90 IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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AR11981-3

MODEL

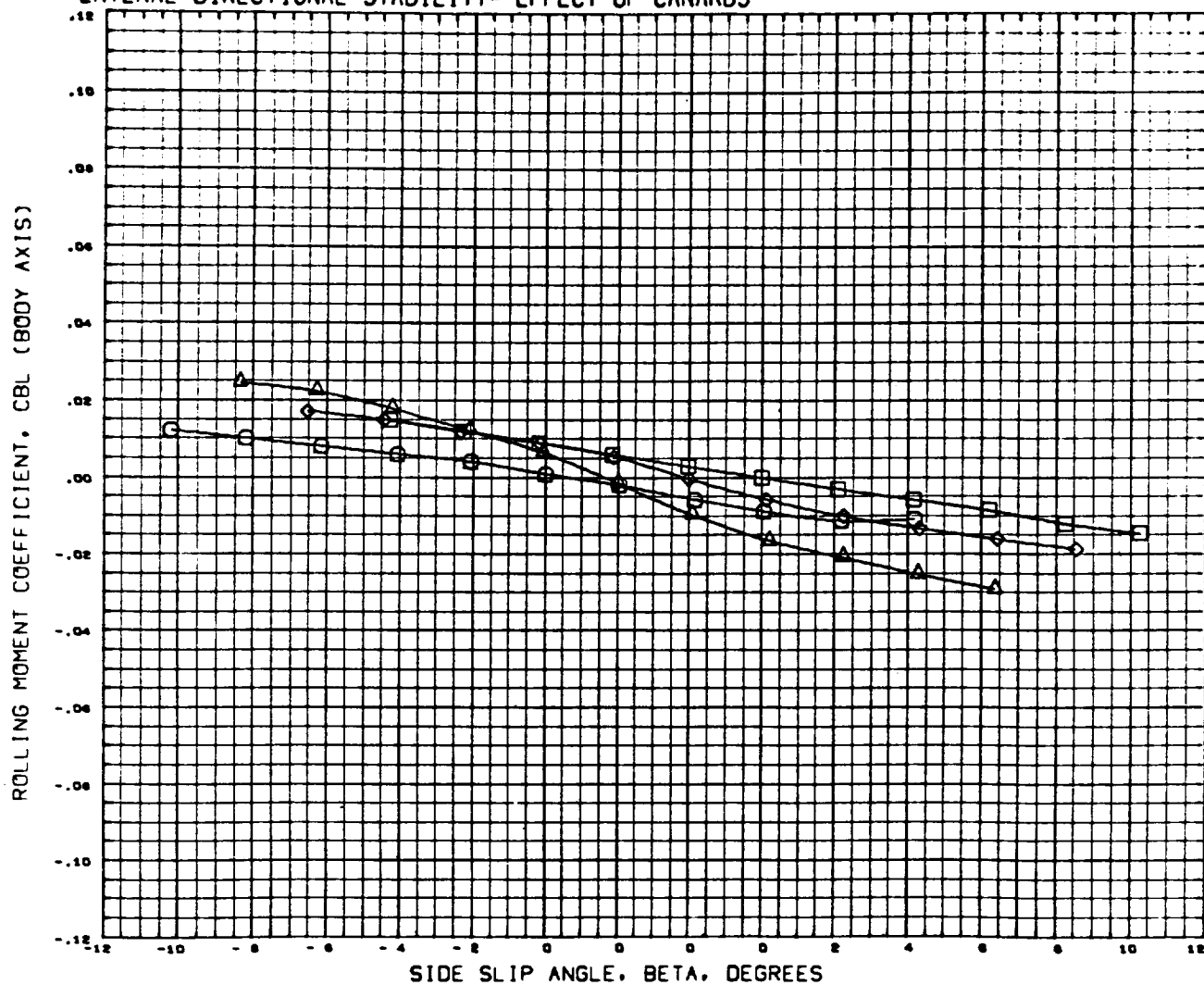
W6B2C12V2

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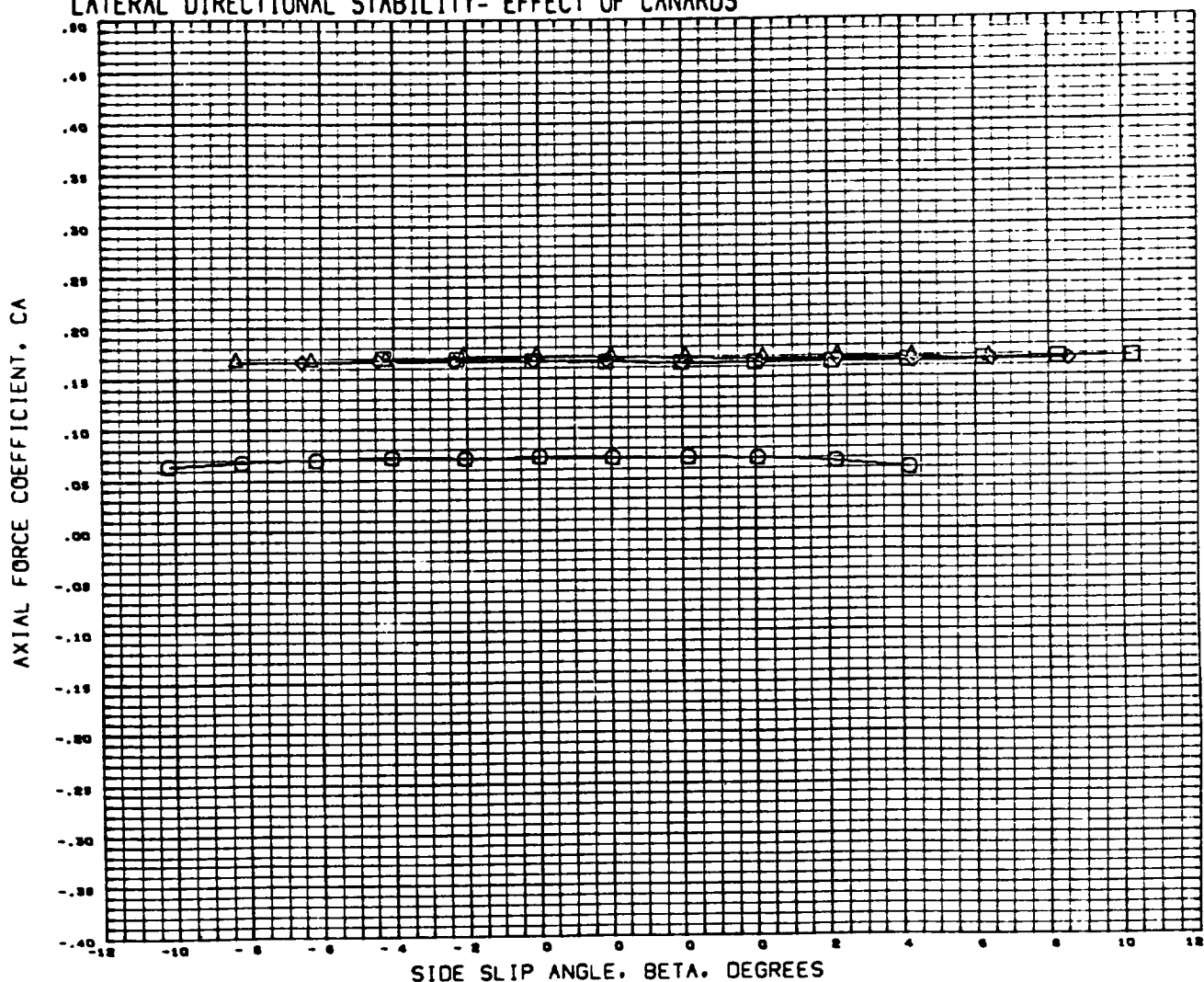
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	0.598	15.000	0.000	0.000	-20.000	4.6225	1.9360	4.3000
◇	1.198	0.000	0.000	0.000	-20.000	2.4000	0.0000	0.0000
△	1.955	0.000	0.000	0.000	-20.000	0.0000	0.0000	0.0000
□	3.485	0.000	0.000	0.000	-20.000	0.0025	0.0025	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



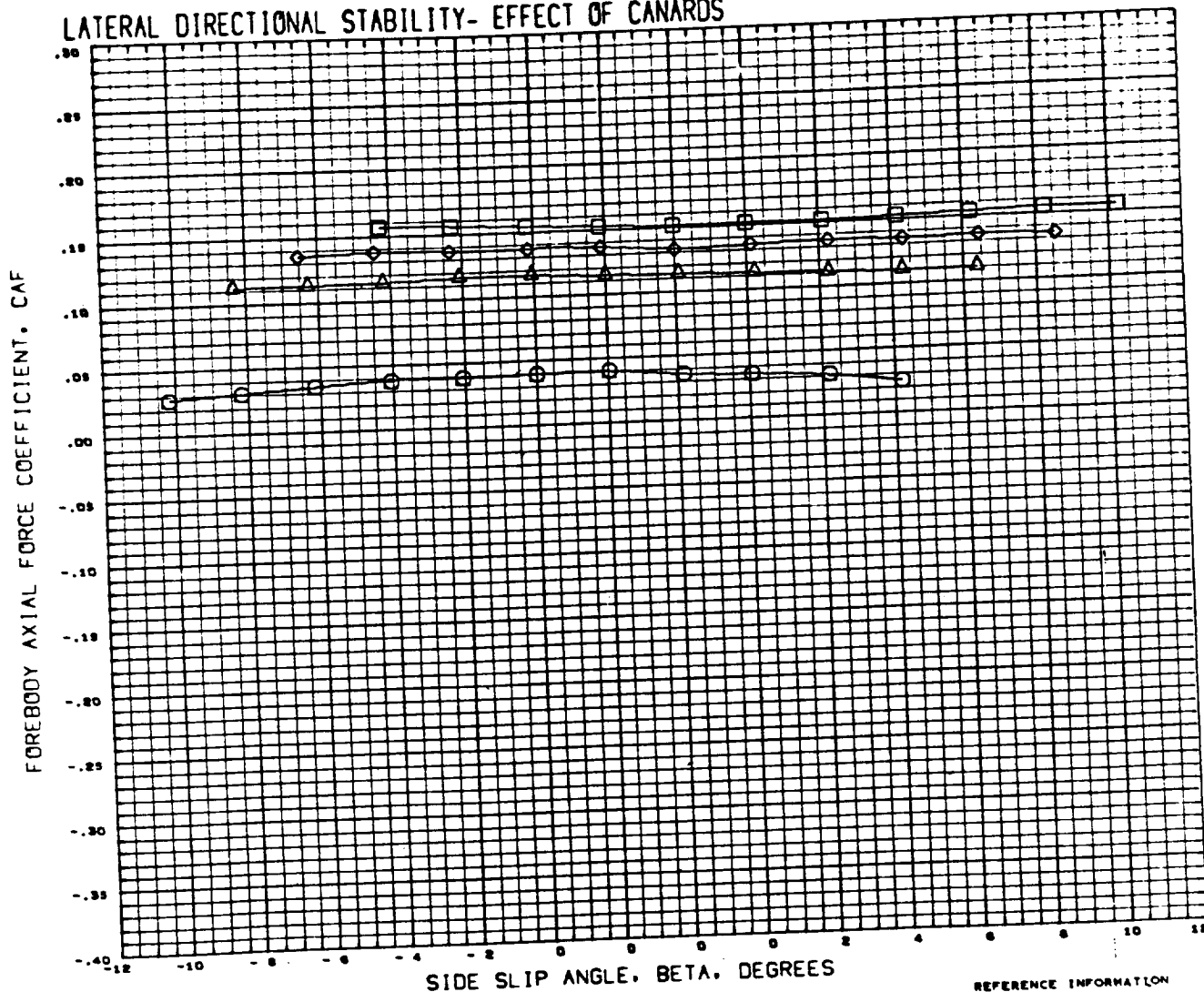
SYMBOL	MACH	PARAMETRIC VALUES
△	0.598	ALPHA 19.000 DEL 0.000
◇	1.198	DER 0.000 ELEVTR 0.000
◇	1.933	AILRON 0.000 CANARD - 20.000
□	3.400	

REFERENCE INFORMATION		
SREF	4.6225	33.1N.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	SREF	SG. IN.
○	0.998	15.000	0.000	0.000		4.6225	80. IN.
◇	1.198	0.000	0.000	0.000		1.5360	IN.
△	1.935	0.000	0.000	0.000		4.3000	IN.
□	3.460	0.000	0.000	0.000	-20.000	2.4000	IN.
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W6B2C12V2

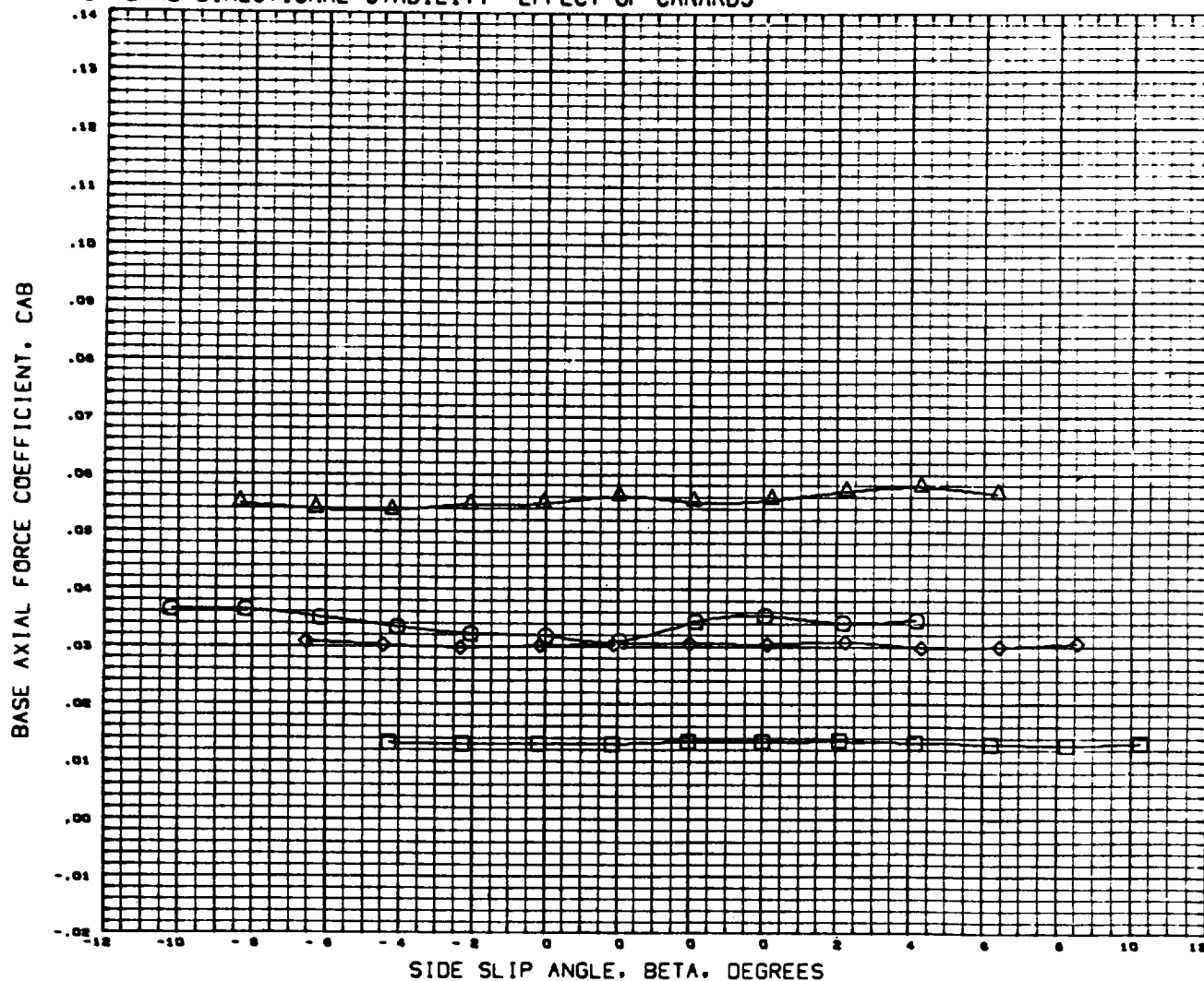
(E3818H)

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.998	ALPHA	15.000	DEL	0.000	SREF	4.6225	SQ. IN.
△	1.198	DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
◇	1.998	AILRON	0.000	CANARD	-20.000	BREF	4.3000	IN.
□	3.480					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

MODEL

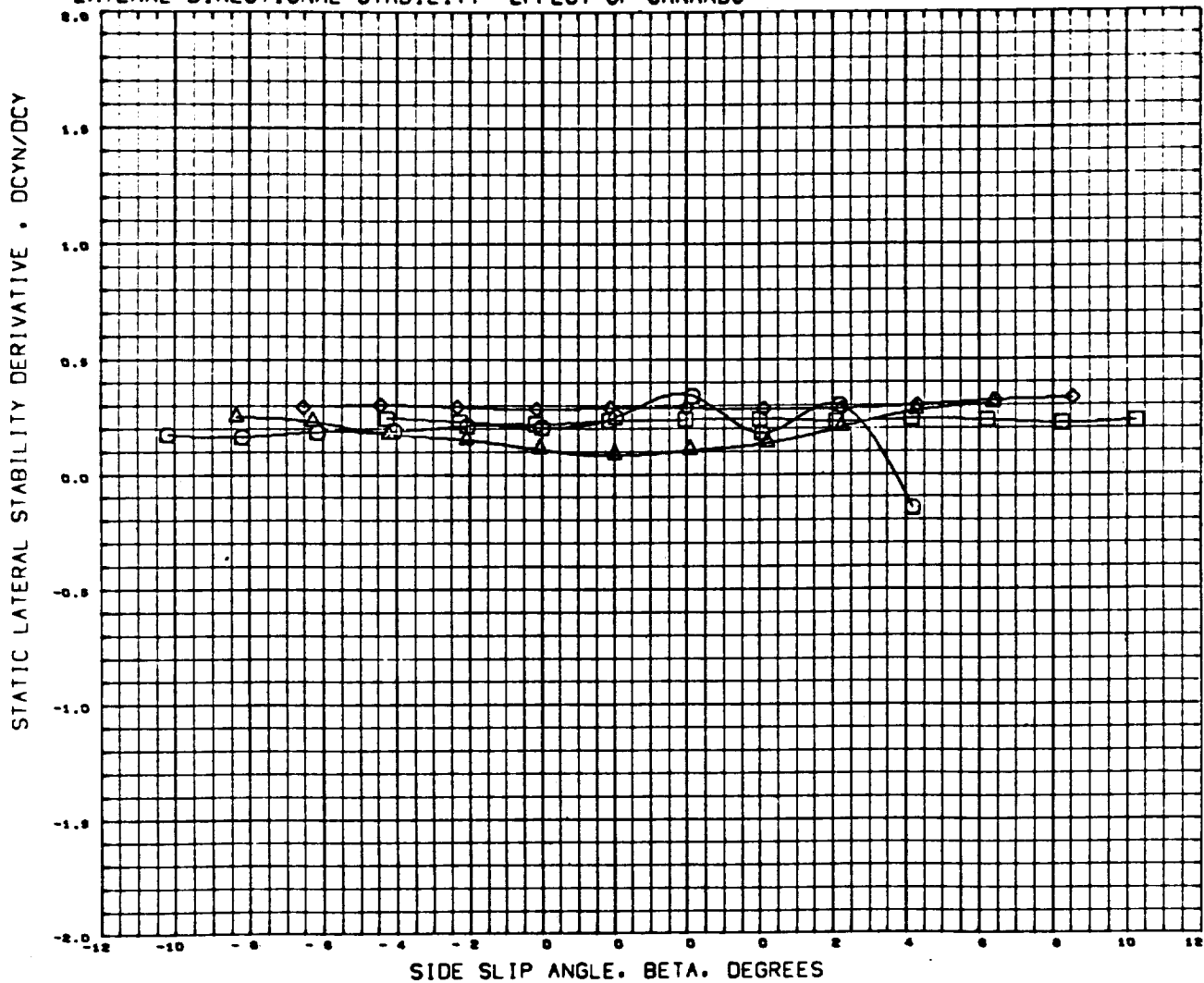
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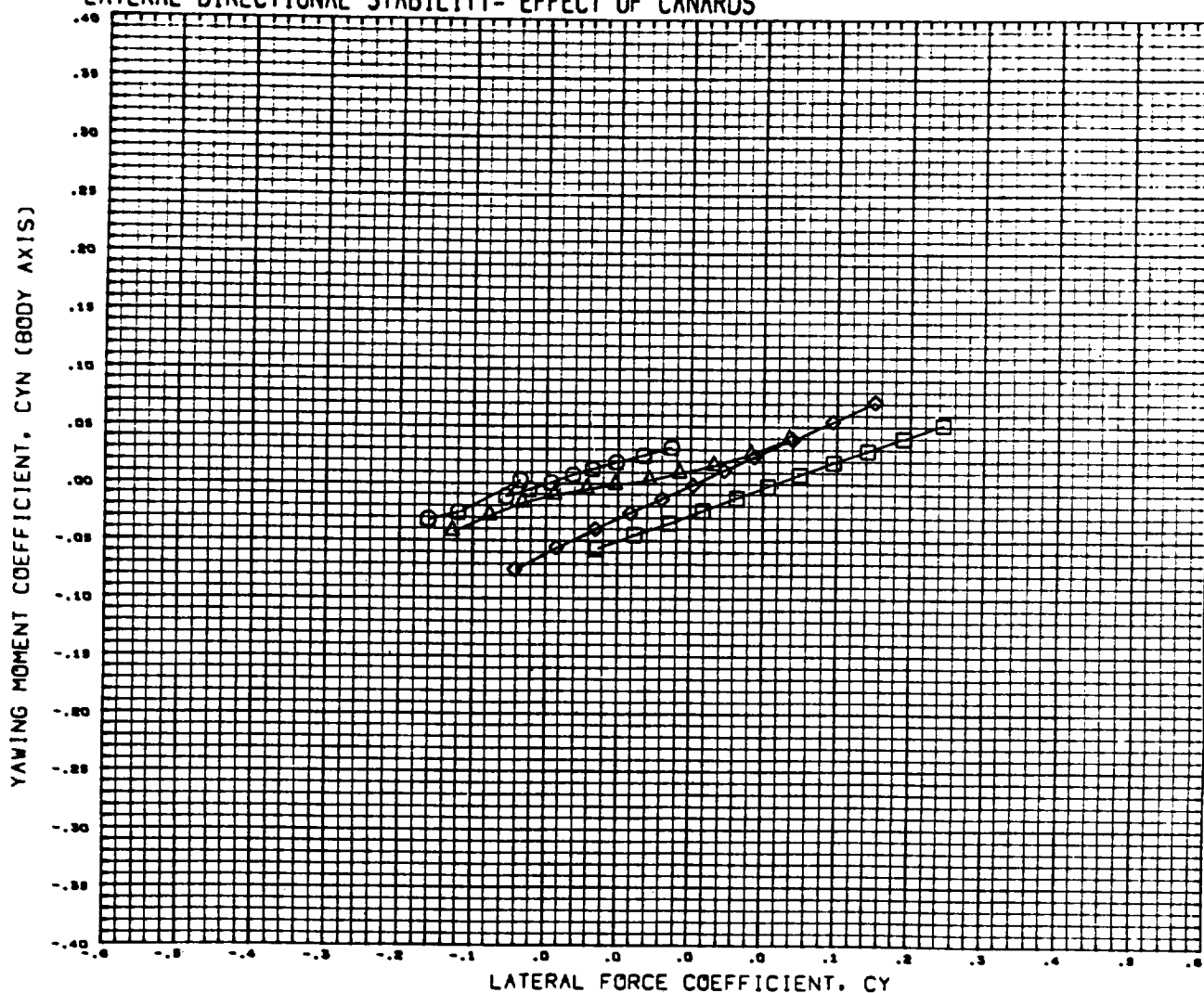
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	0.998	ALPHA 15.000 DEL 0.000	SRFP 4.6225 SQ. IN.
△	1.196	DER 0.000 ELEVTR 0.000	LRFP 1.3360 IN.
◇	1.953	ATLRON 0.000 CANARD - 20.000	BRFP 4.3000 IN.
□	3.480		XRFP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE 0E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.998	ALPHA	15.000	DEL	0.000	SREF	4.6225	30. IN.
◇	1.198	DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
□	1.955	ATLRON	0.000	CANARD	- 20.000	BREF	4.3000	IN.
□	3.480					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC

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MODEL

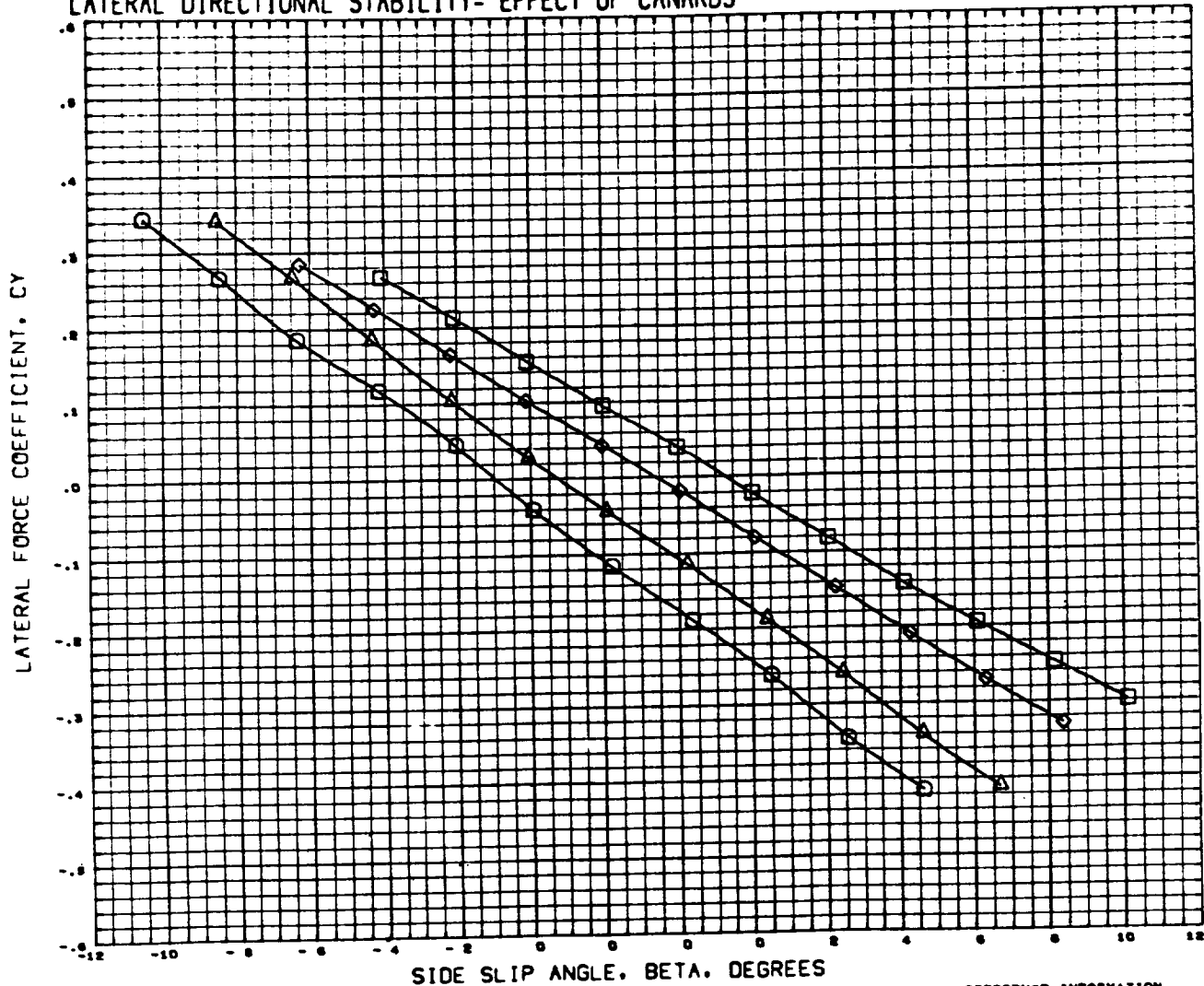
W682C12V2

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.198	ALPHA 30.000 DEL 0.000	BREF 4.6225 SQ. IN.
△	1.953	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	3.480	ATLRON 0.000 CANARD - 40.000	BREF 4.3000 IN.
□	4.939		ENRP 2.4000 IN.
			THRP 0.0000 IN.
			ZHRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

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MODEL

W6B2C12V2

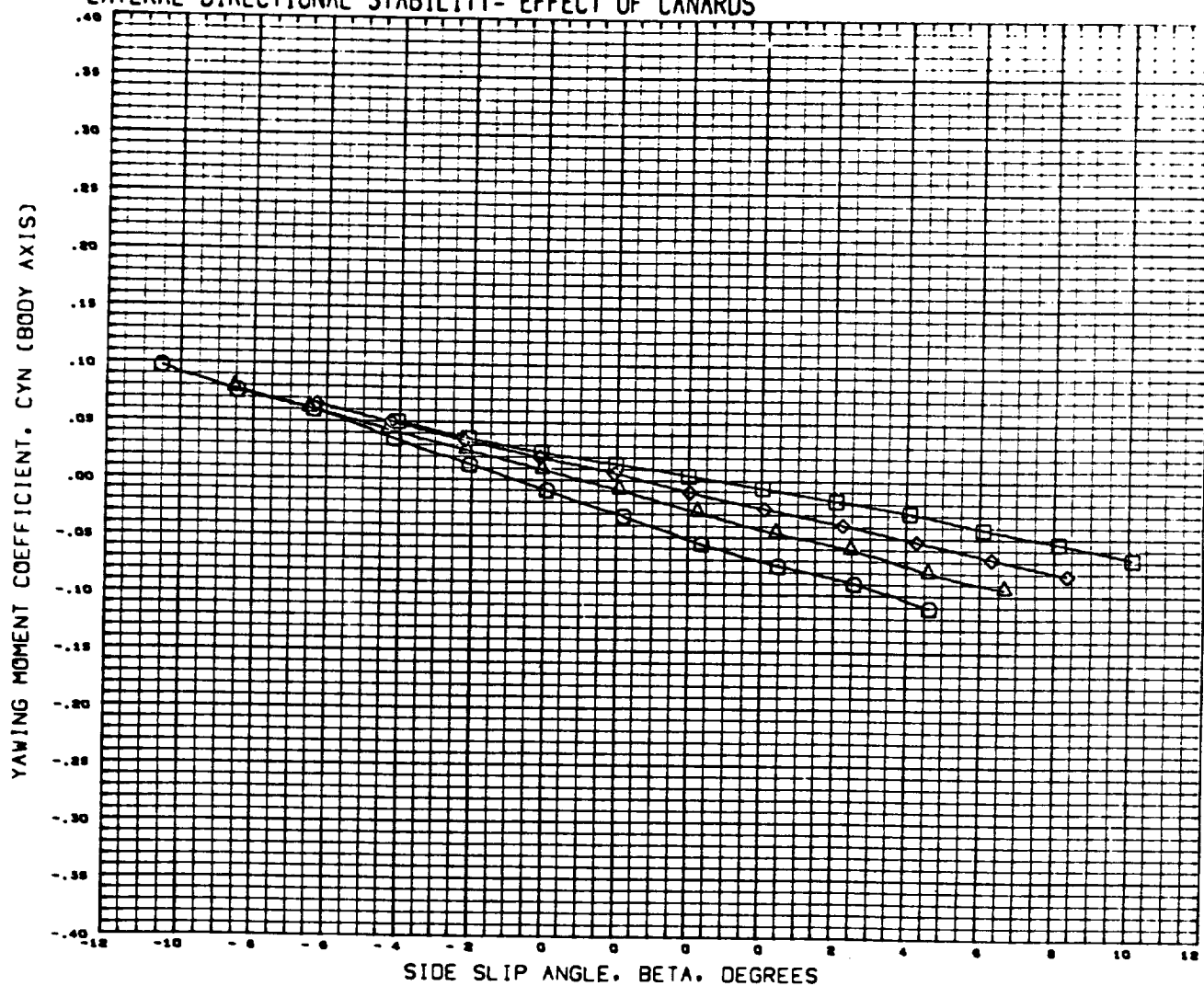
(E38191)

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

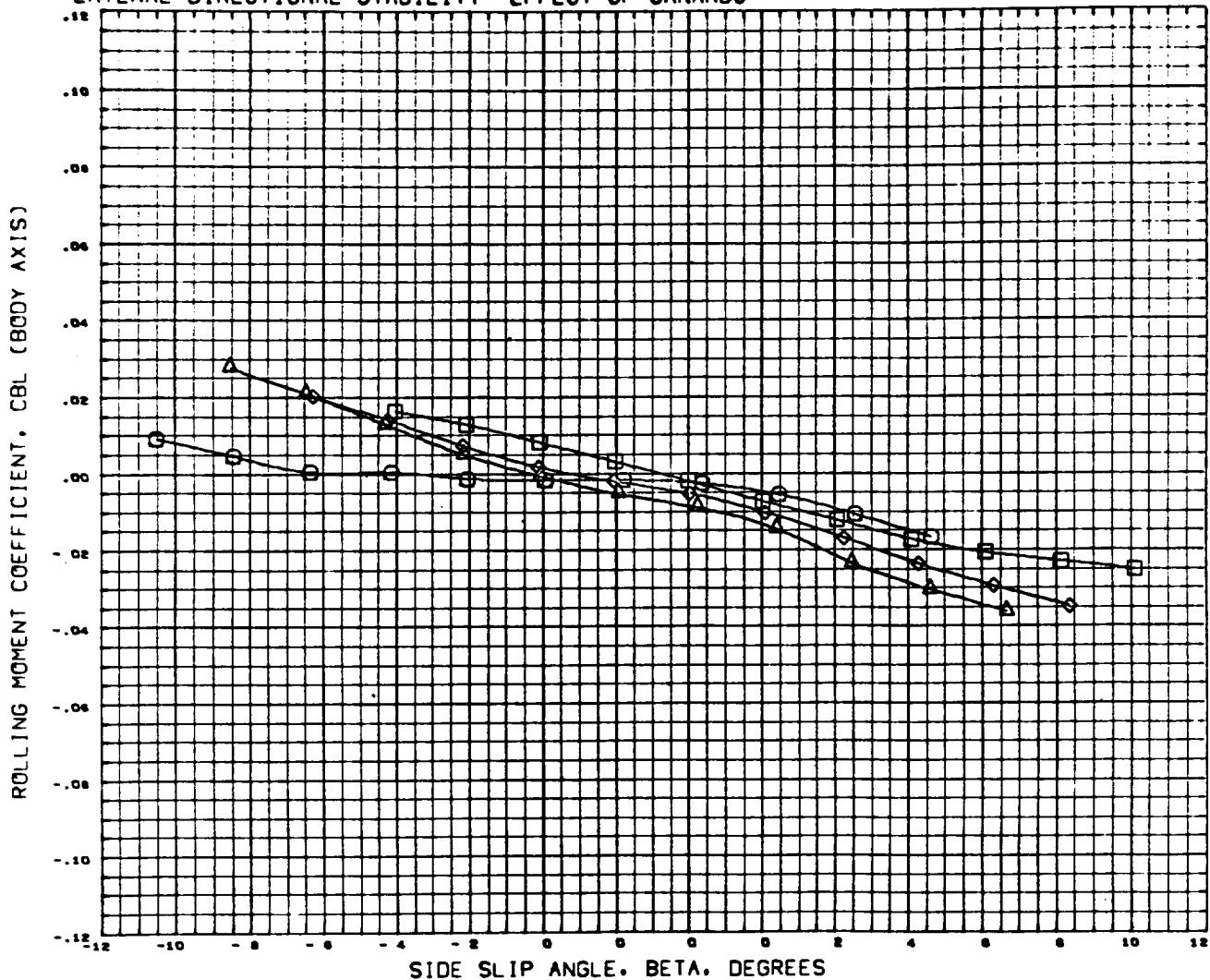


SYMBOL	MACH	PARAMETRIC VALUES
○	1.196	ALPHA 30.000 DEL 0.000
△	1.993	DER 0.000 ELEVTR 0.000
◇	3.480	AIRLON 0.000 CANARD - 40.000
□	4.939	

REFERENCE INFORMATION		
SREP	4.6225	30. IN.
LREP	1.3360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

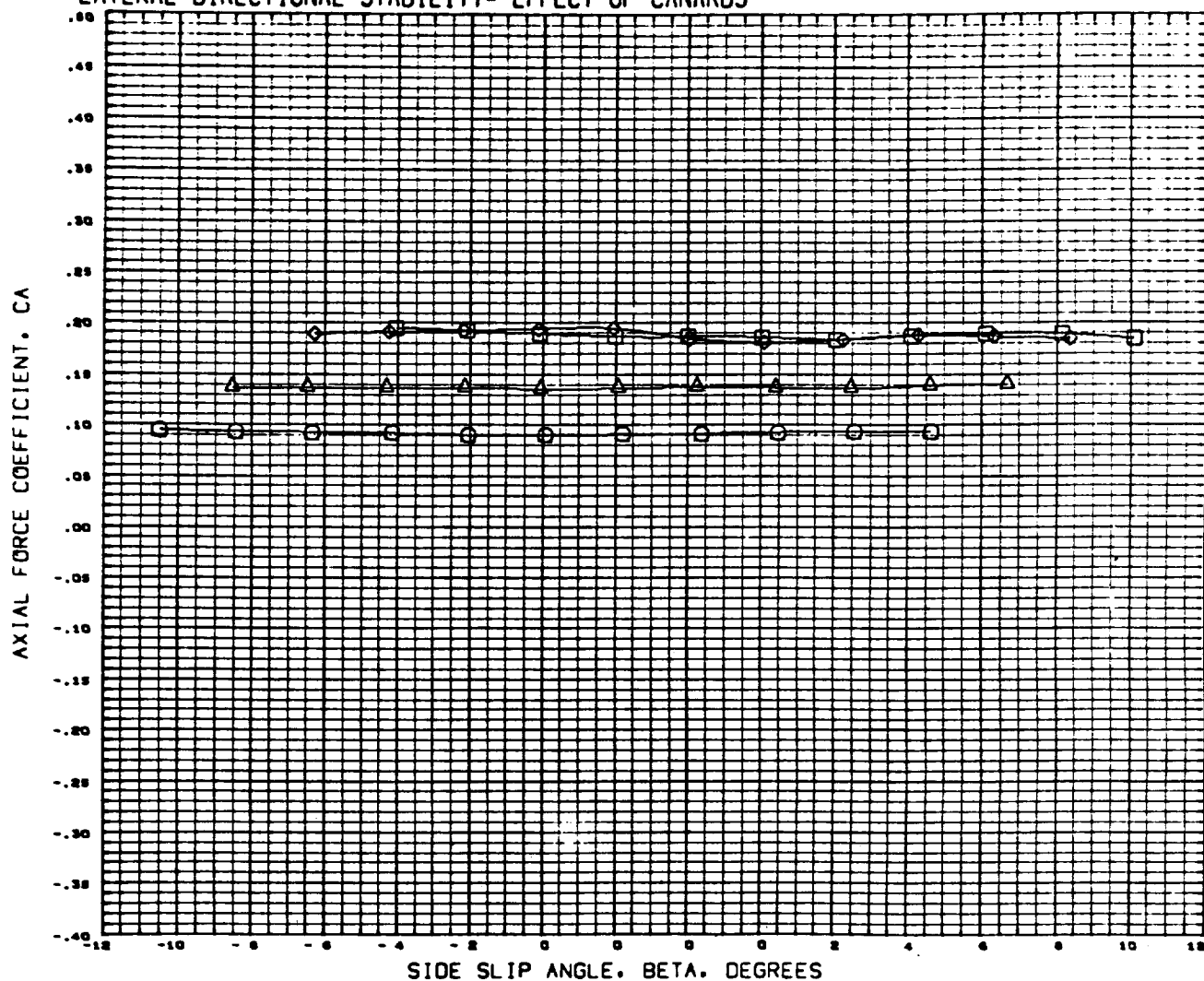
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	BREF	LREF	SCALE
○	1.196	30.000	0.000	0.000	-40.000	4.6225	1.9360	80. IN.
◇	1.953	0.000	0.000	0.000	-40.000	4.3000	1.9360	IN.
□	3.480	0.000	0.000	0.000	-40.000	2.4000	1.9360	IN.
△	4.959	0.000	0.000	0.000	-40.000	0.0000	1.9360	IN.

DATA HIST. CODE *E

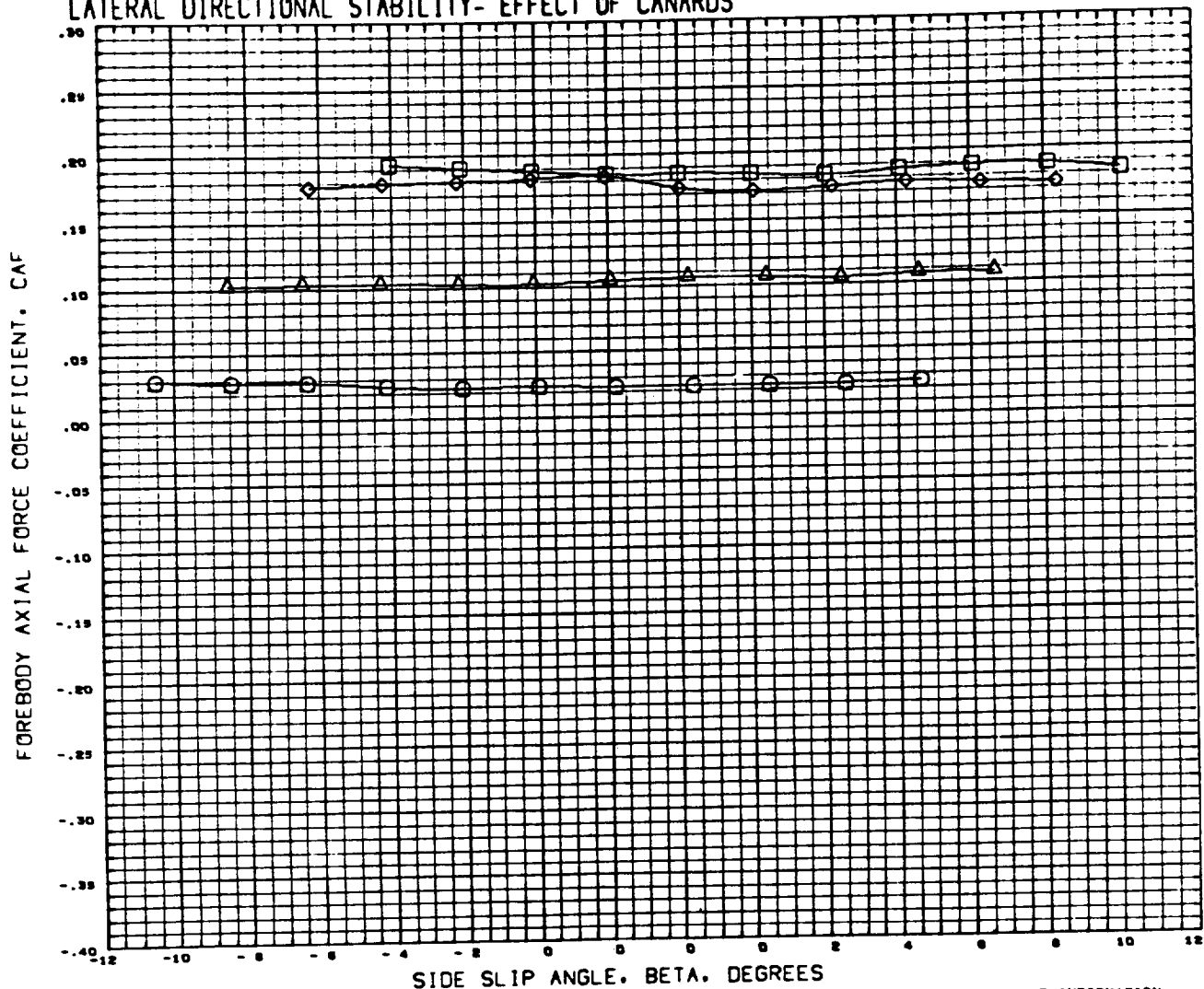
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.198	ALPHA	30.000	DEL	0.000	SREP	4.6225	50. IN.
△	1.993	DER	0.000	ELEVTR	0.000	LREP	1.5360	IN.
◇	3.480	AILRON	0.000	CANARD	- 40.000	BREP	4.3000	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

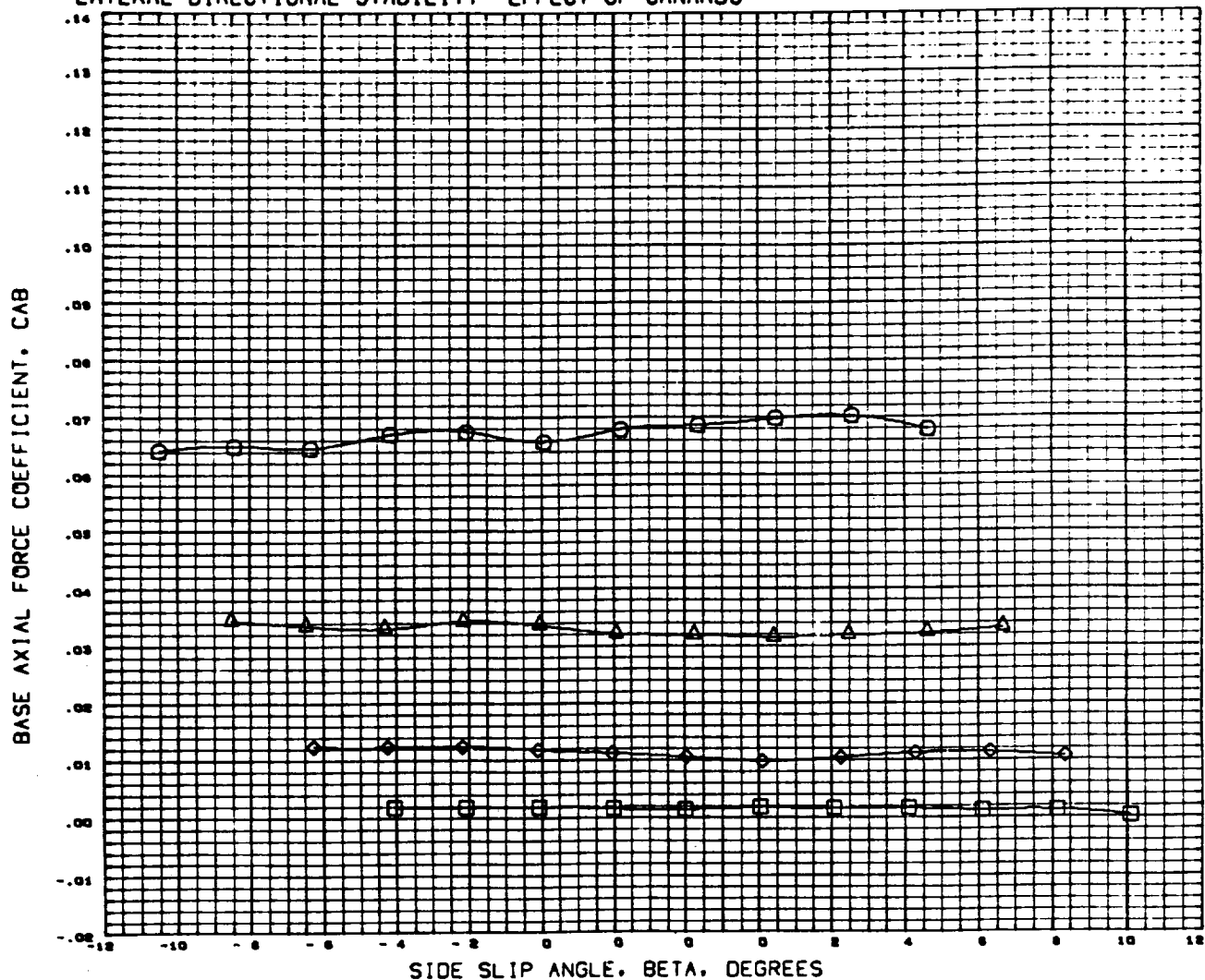


SYMBOL	MACH	PARAMETRIC VALUES			
	1.188	ALPHA	30.000	DEL	0.000
	1.953	DER	0.000	ELEVTR	0.000
	3.485	ATLRON	0.000	CANARD	- 40.000
4.959					

REFERENCE INFORMATION		
SREF	4.0225	80. IN.
LREF	1.5360	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

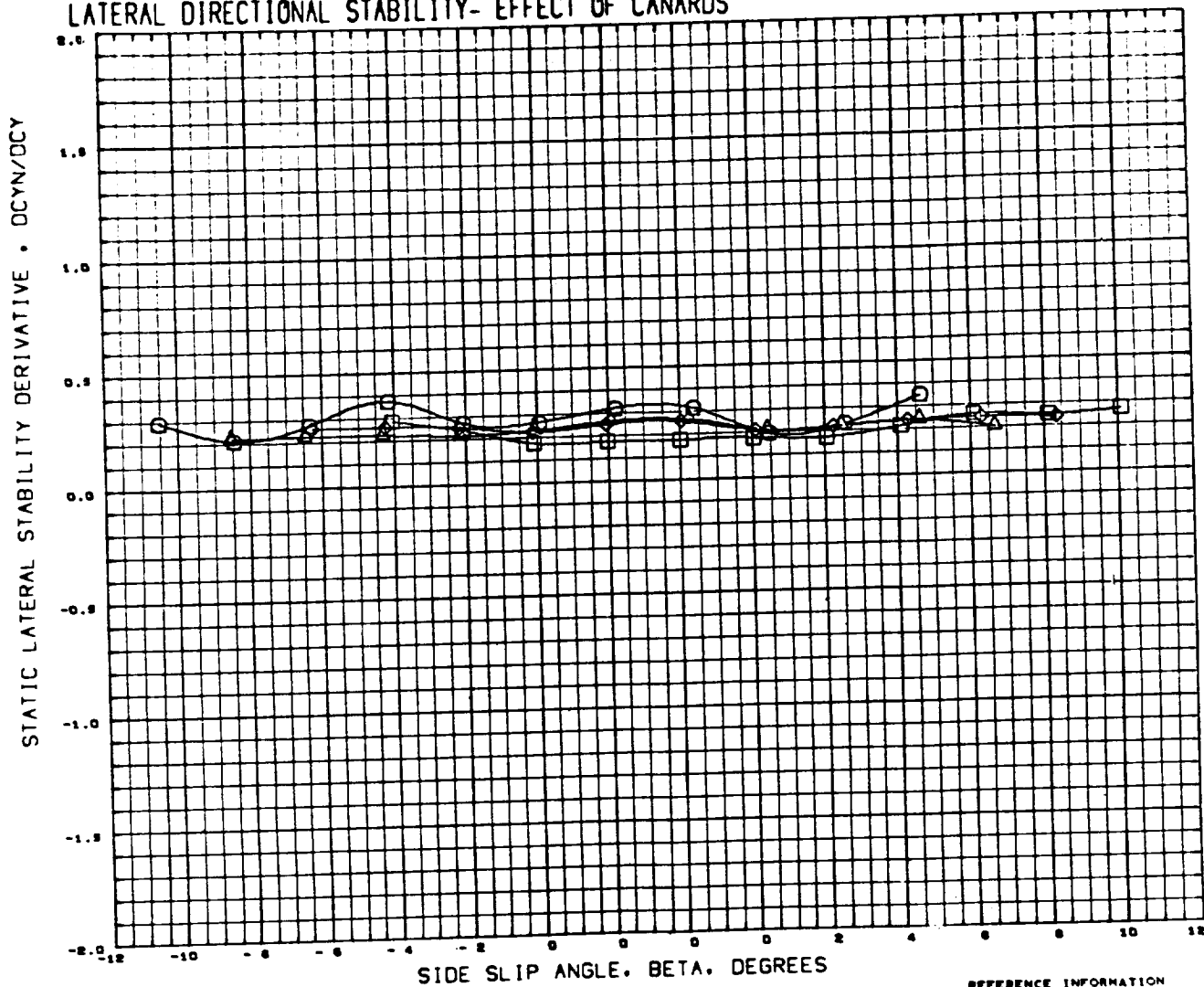
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.198	ALPHA 30.000 DEL 0.000	SREF 4.6225 SQ. IN.
△	1.953	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
◇	3.490	AILRON 0.000 CANARD - 40.000	BREF 4.3000 IN.
□	4.959		XHRP 2.4000 IN.
			YHRP 0.0000 IN.
			ZHRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES
○	1.196	ALPHA 30.000 DEL 0.000
△	1.953	DER 0.000 ELEVTR 0.000
◇	3.480	AILRON 0.000 CANARD - 40.000
□	4.959	

REFERENCE INFORMATION		
BREF	4.6225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

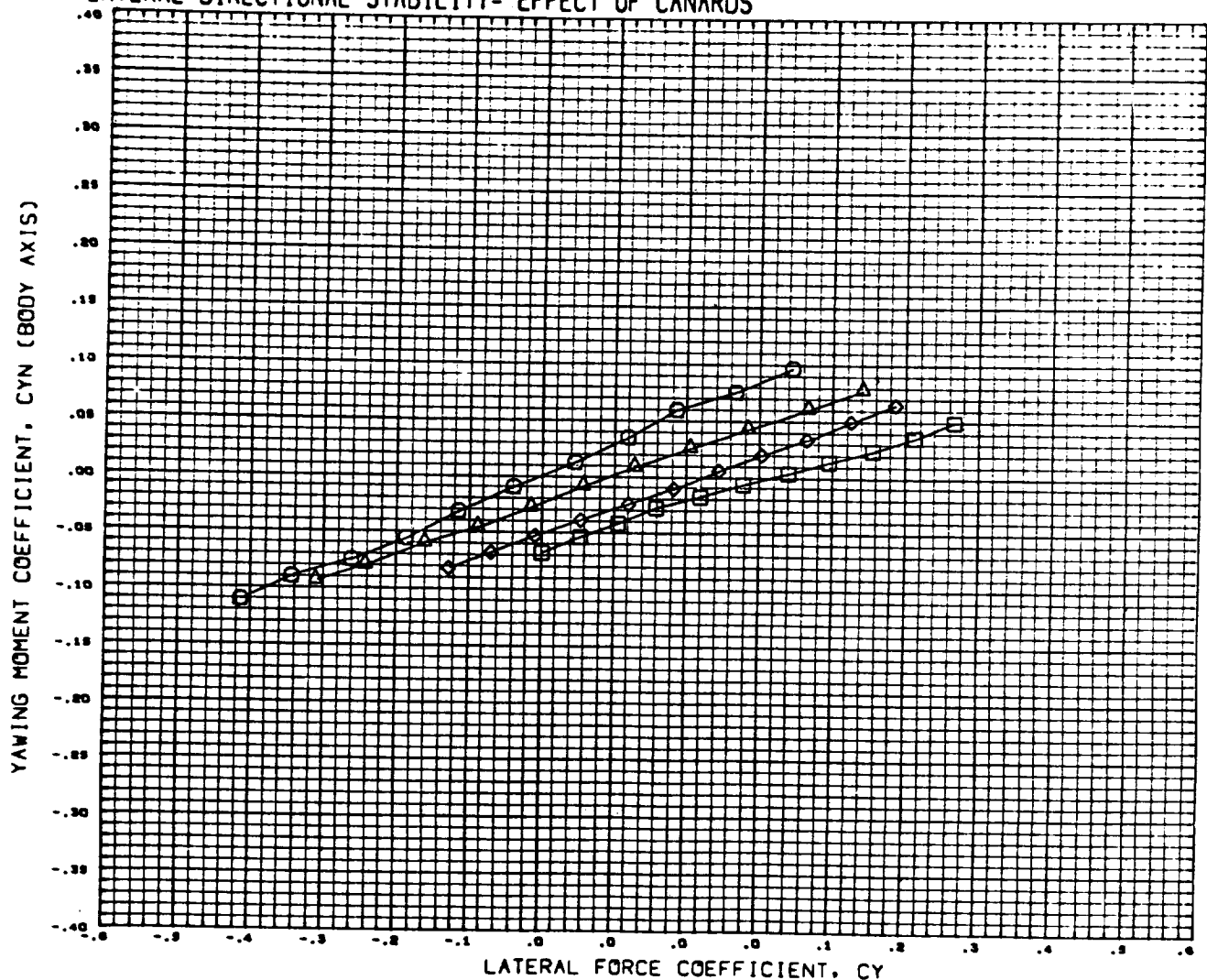
MODEL

W6B2C12V2

(E38191) 06 SEP 72

PAGE 405

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



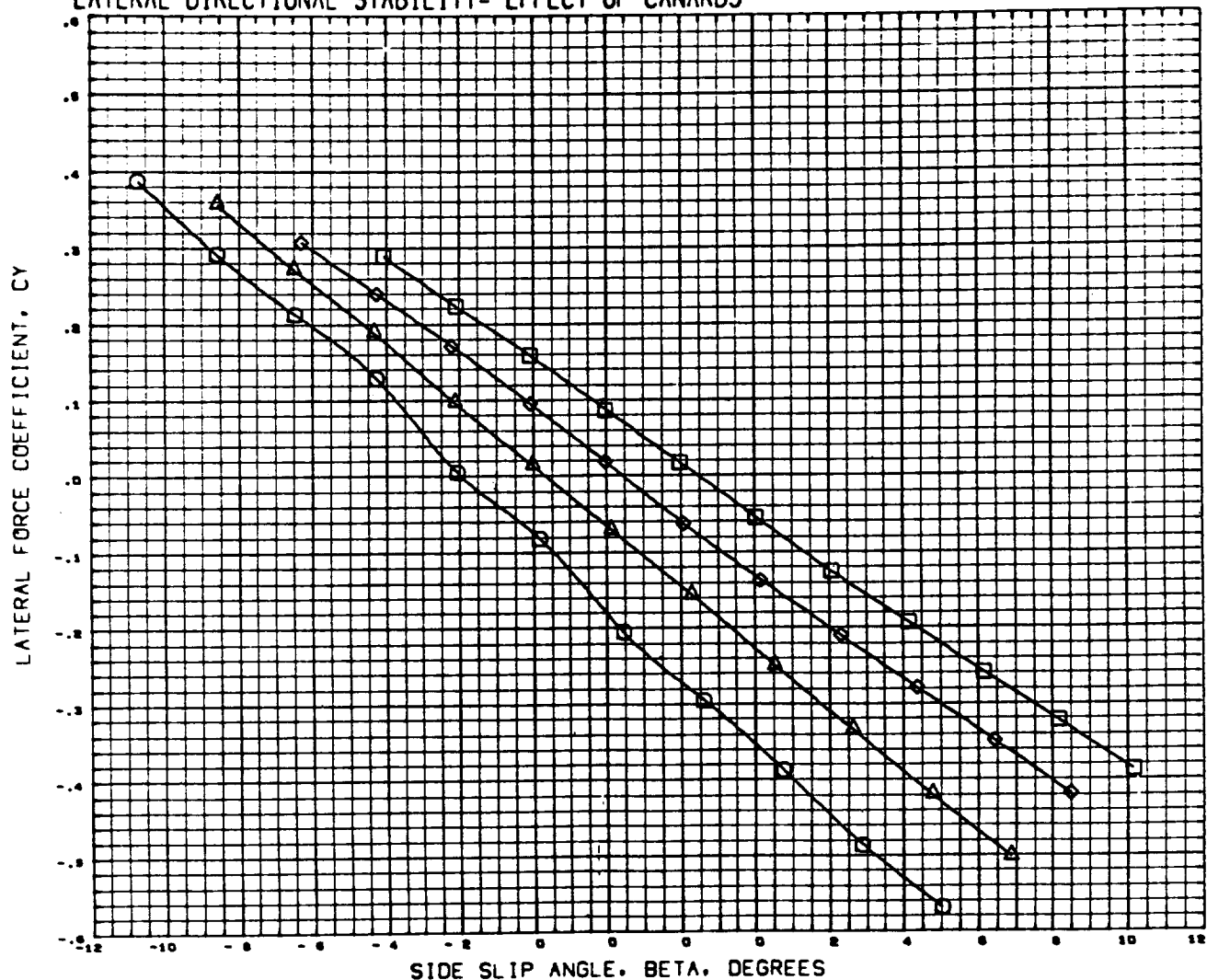
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.198	ALPHA	30.000	DEL	0.000
△	1.953	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000	CANARD	-40.000
□	4.959				

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W682C12V2 (E38191) 06 SEP 72 PAGE 406

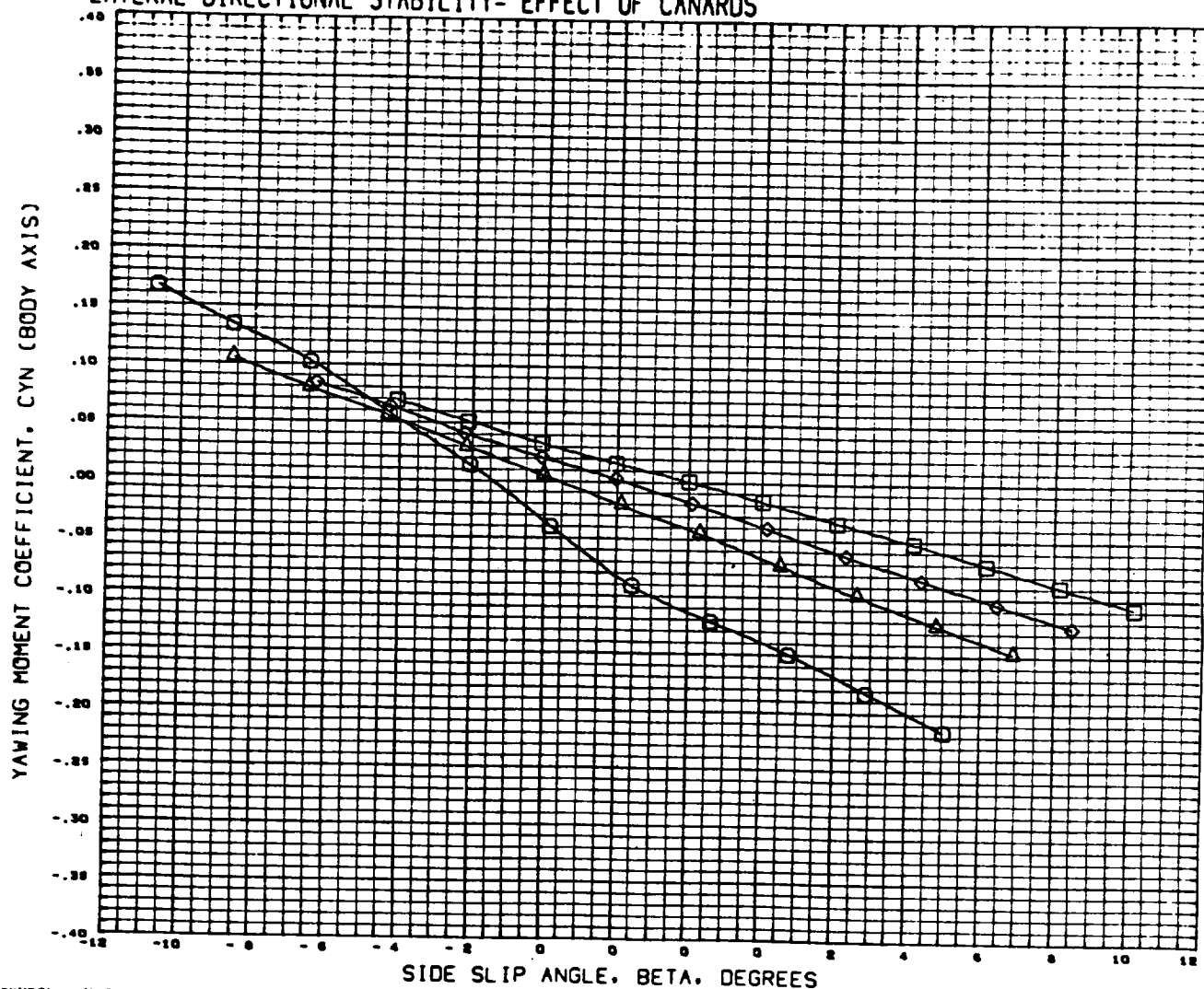
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.196	ALPHA	30.000	DEL	0.000	SRF	4.6225	50. IN.
△	1.953	DER	0.000	ELEVTR	0.000	LRP	1.5360	IN.
◇	3.480	AILRON	0.000	CANARD	- 60.000	BRP	4.3000	IN.
□	4.959					XRFP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

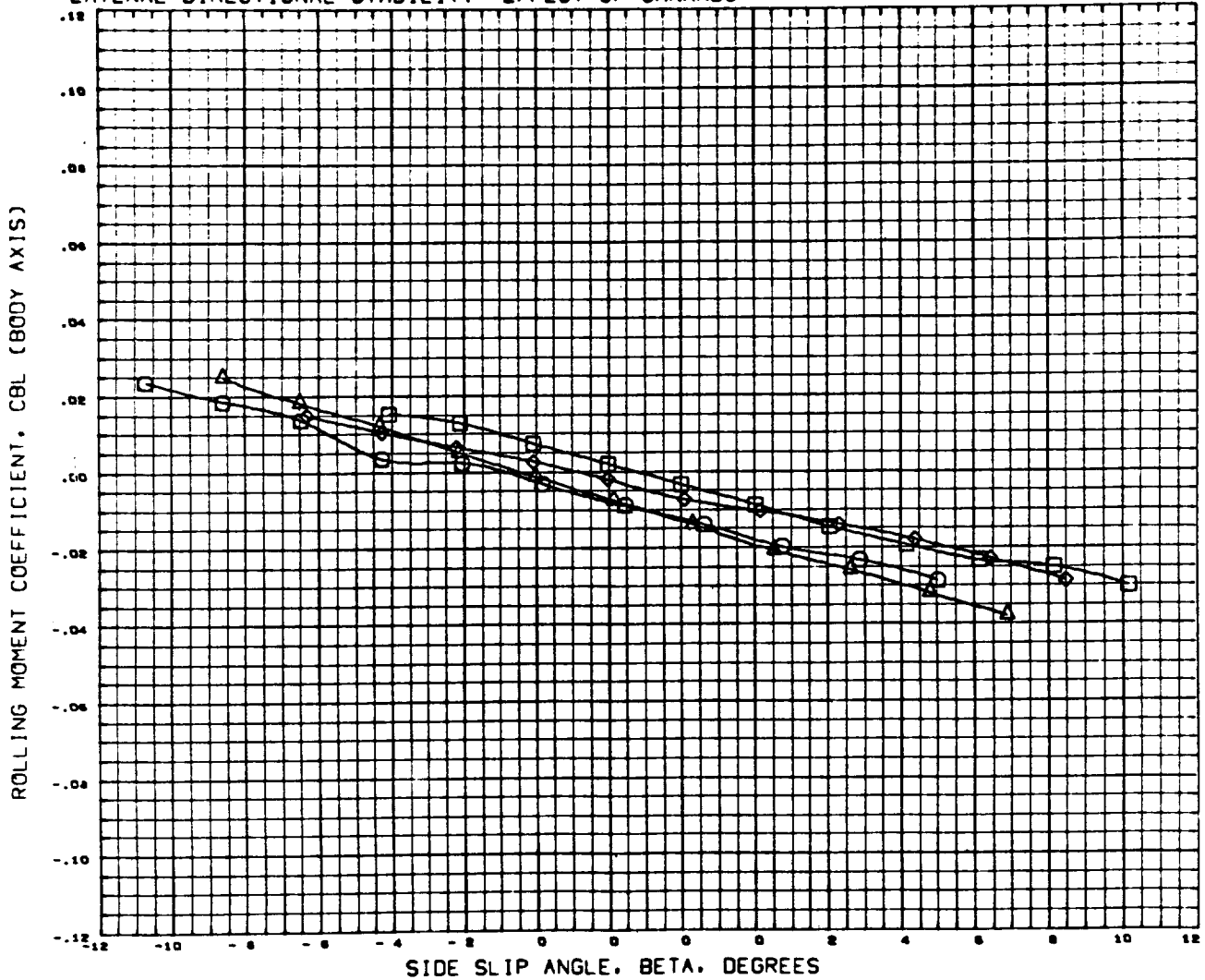
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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.196	ALPHA 50.000 DEL 0.000	SREF 4.8225 SQ. IN.
△	1.933	DER 0.000 ELEVTR 0.000	LREF 1.5360 IN.
□	3.480	ATLRON 0.000 CANARD - 60.000	BREF 4.3000 IN.
◇	4.939		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

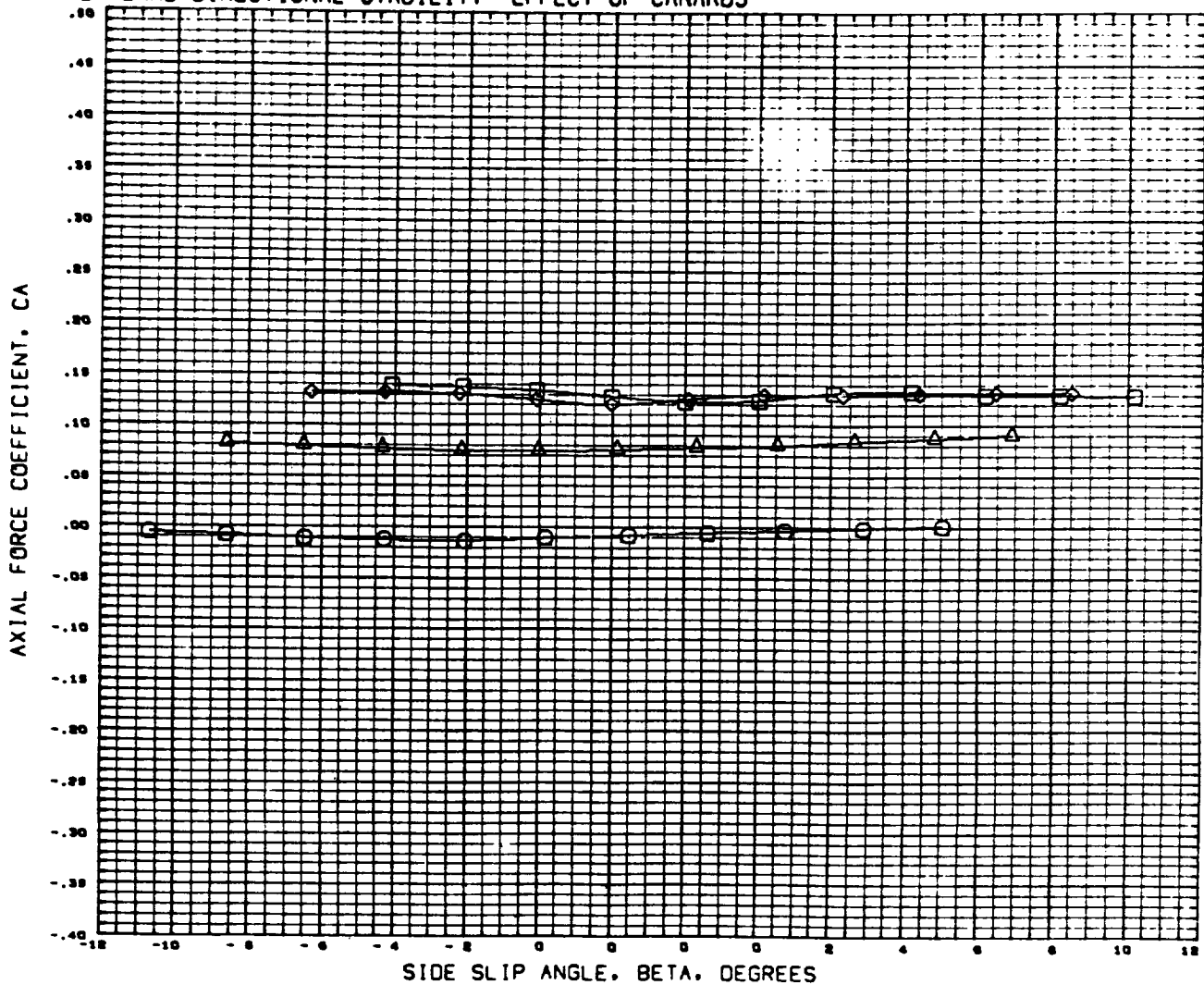
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	SRF	SQ. IN.
△	1.196	50.000	0.000	0.000		4.6225	
□	1.953	0.000	0.000	0.000		1.5360	IN.
◇	3.480	ATLRON	0.000	0.000	- 80.000	4.3000	IN.
○	4.939					2.4000	IN.
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

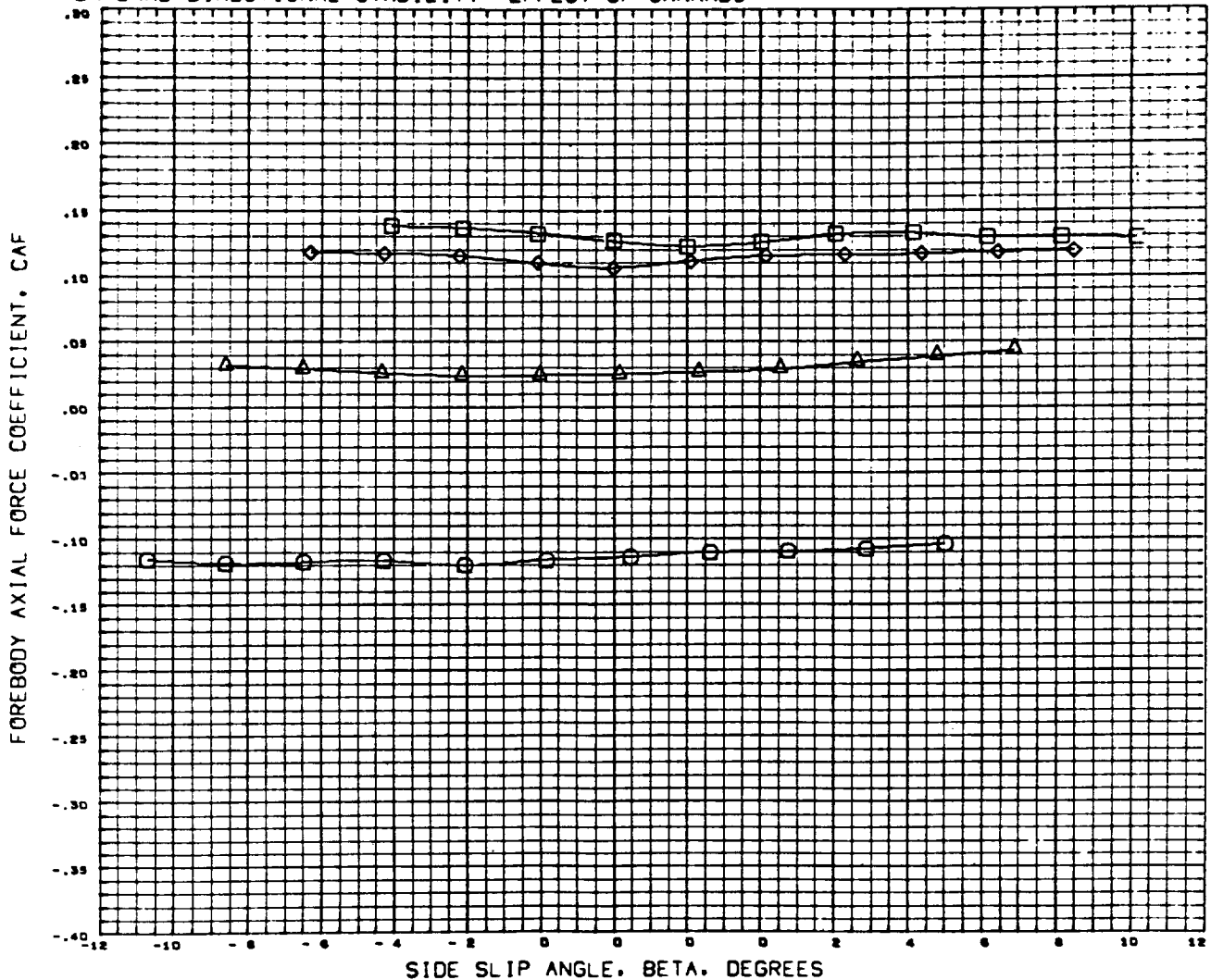


SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.196	ALPHA	50.000	DEL	0.000		SREP	4.6225	SQ. IN.
△	1.993	DER	0.000	ELEVTR	0.000		LREF	1.9360	IN.
◇	3.480	AILRON	0.000	CANARD	- 60.000		BREF	4.3000	IN.
□	4.939						XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0029	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W682C12V2 (E3820J) 06 SEP 72 PAGE 410

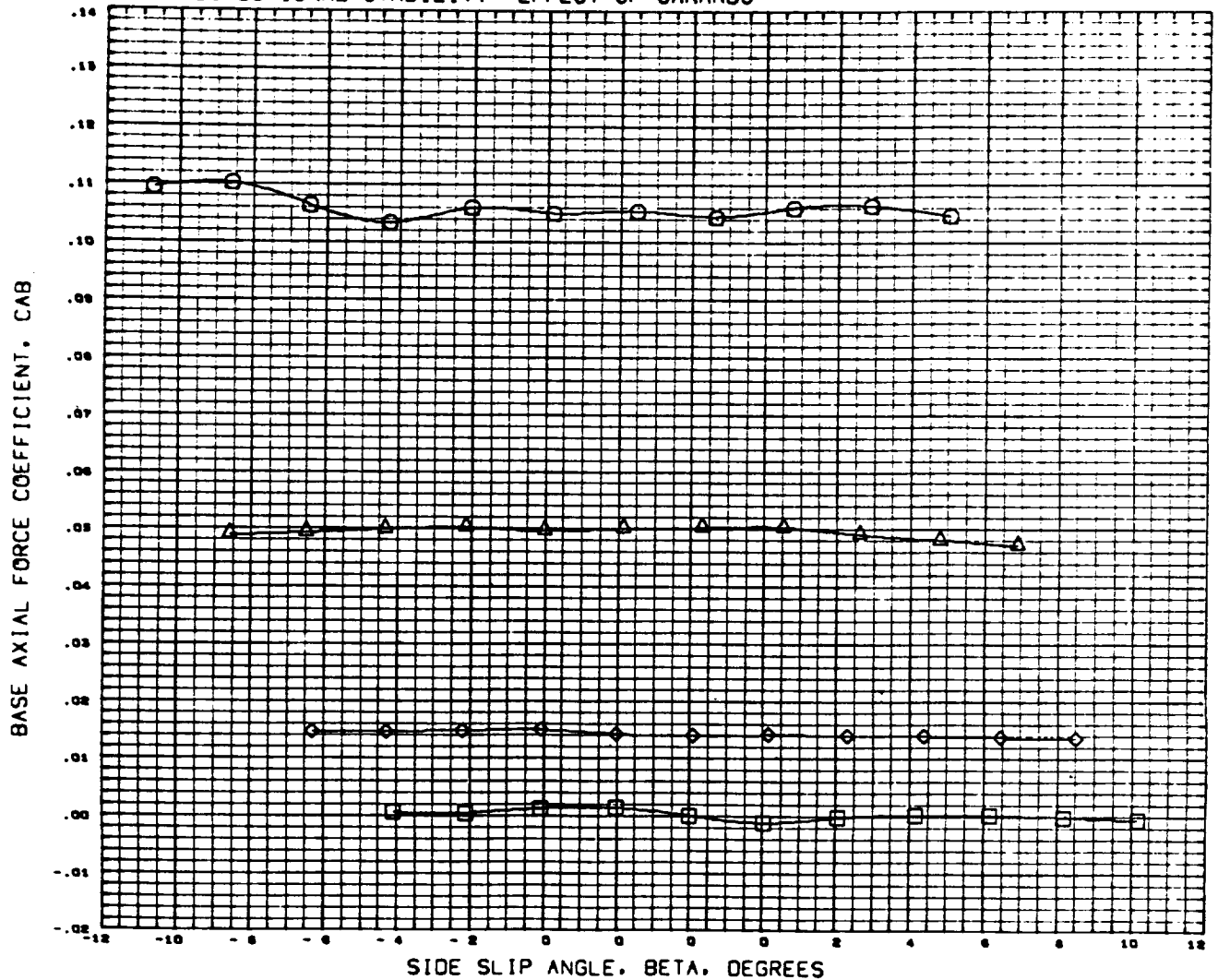
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	1.196	ALPHA	50.000	DEL	0.000	SREF	4.6225 30. IN.
◇	1.953	DER	0.000	ELEVTR	0.000	LREF	1.5360 IN.
△	3.480	AILRON	0.000	CANARD	- 60.000	BREF	4.3000 IN.
□	4.959					XHRP	8.4000 IN.
						YHRP	0.0000 IN.
						ZHRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

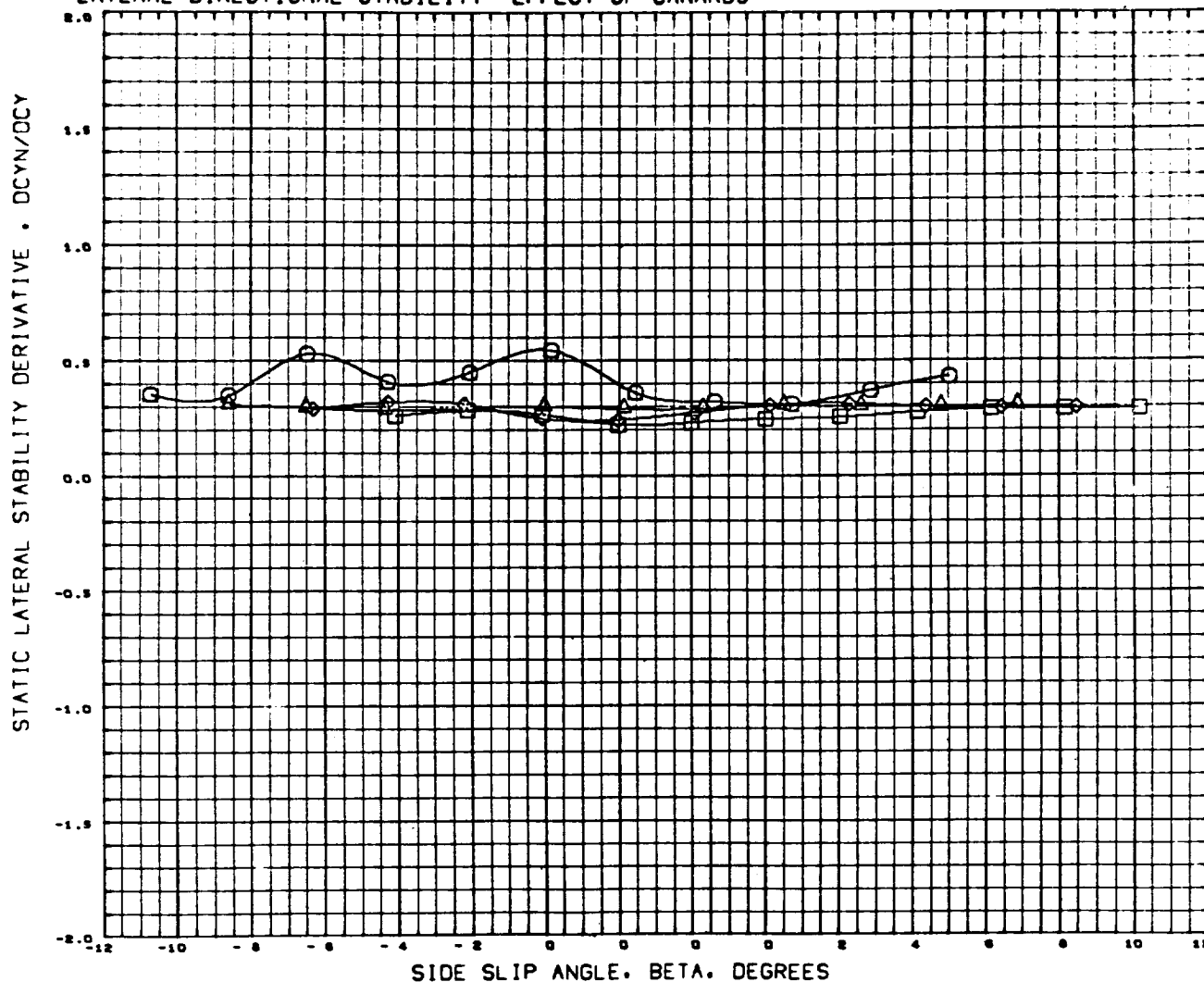
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
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○	1.993	DER	0.000	ELEVTR	0.000		LREF	1.5360	IN.
△	3.490	AILRON	0.000	CANARD	- 60.000		BREF	4.3000	IN.
◇	4.959						XMRP	2.4000	IN.
□							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

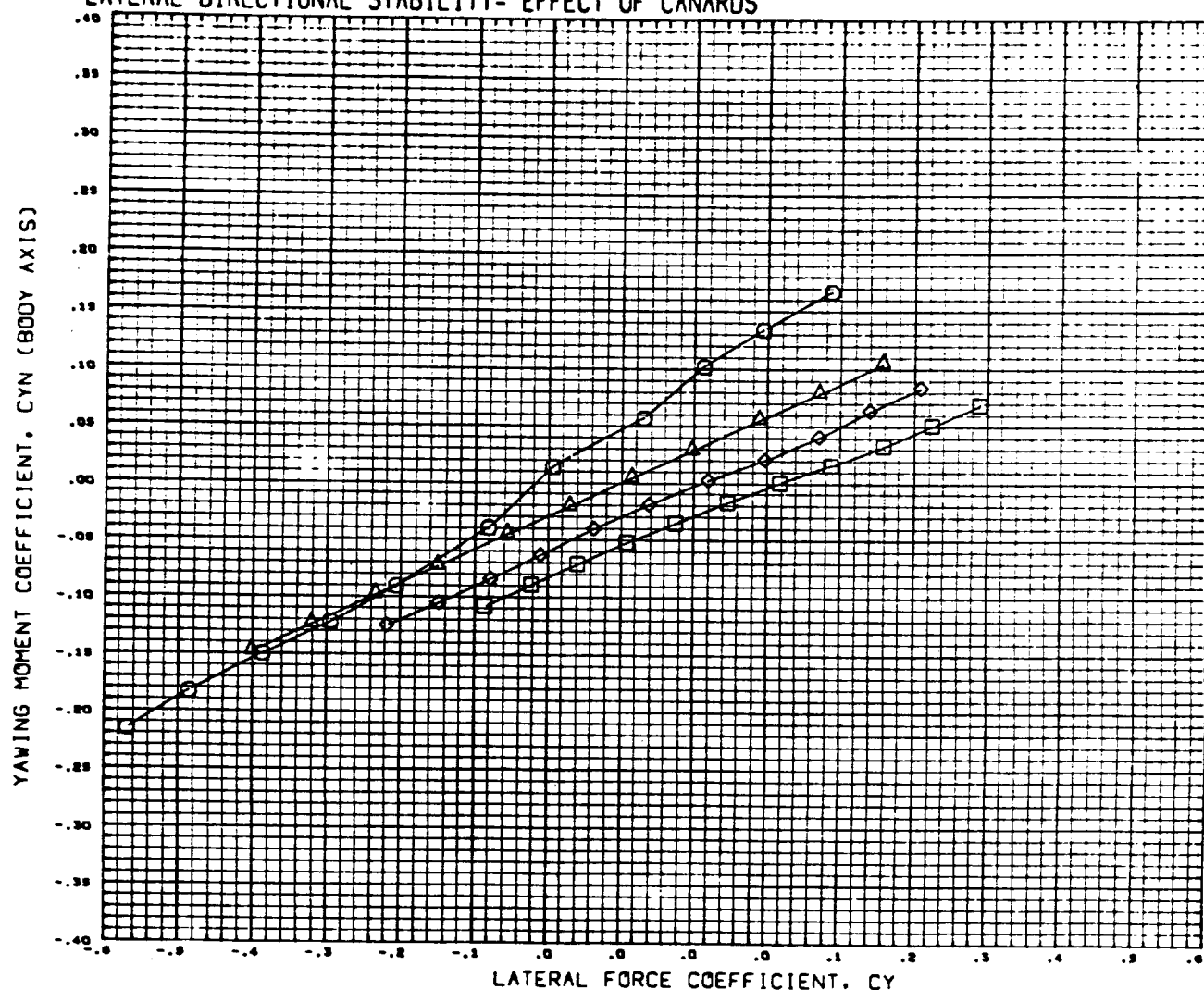
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	1.196	30.000	0.000	0.000	-80.000	4.6225	1.3360	4.3000
◇	1.953	0.000	0.000	0.000		2.4000	0.0000	0.0000
△	3.480	0.000	0.000	0.000		0.0000	0.0000	0.0000
□	4.939					0.0025		

DATA HIST. CODE *E

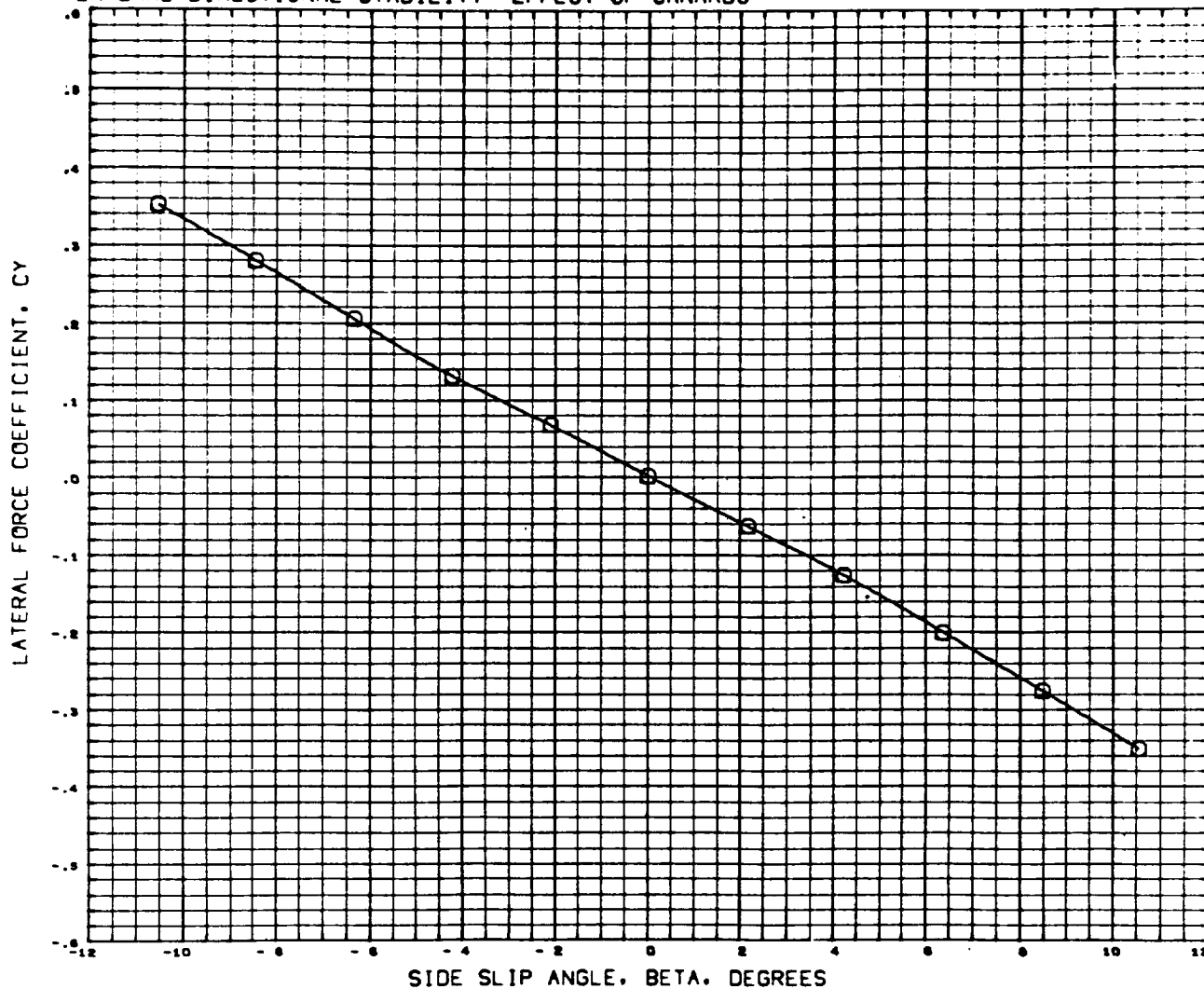
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.196	ALPHA	50.000	DEL	0.000	SREF	4.6225	SQ. IN.
△	1.953	DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
◇	3.480	AIRTON	0.000	CANARD	- 60.000	BREF	4.3000	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE 0E

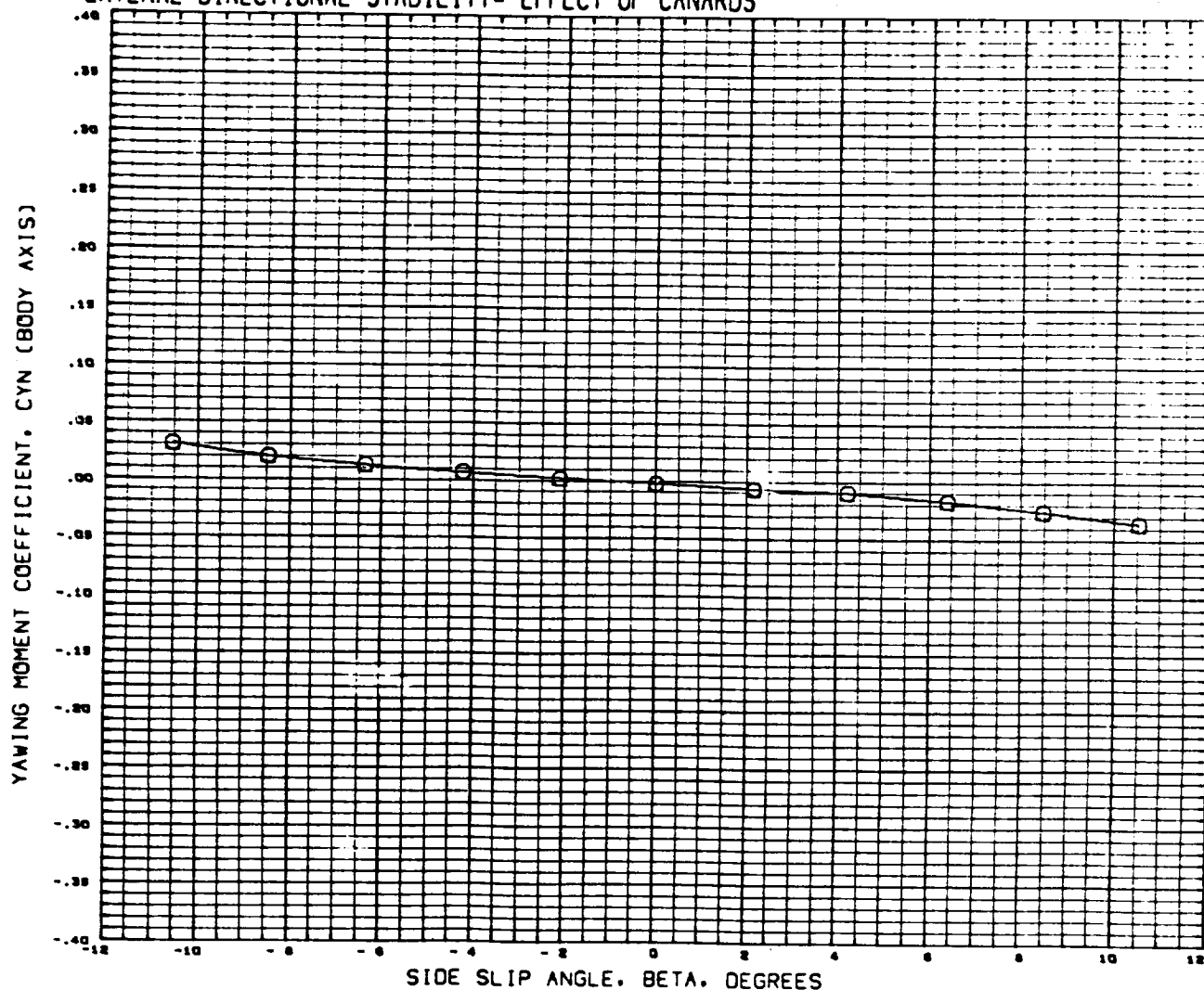
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.952		ALPHA	19.000	DEL	0.000	SREF	4.6225	SQ. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
				AILRON	0.000	CANARD	-20.000	BREF	4.3000	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	

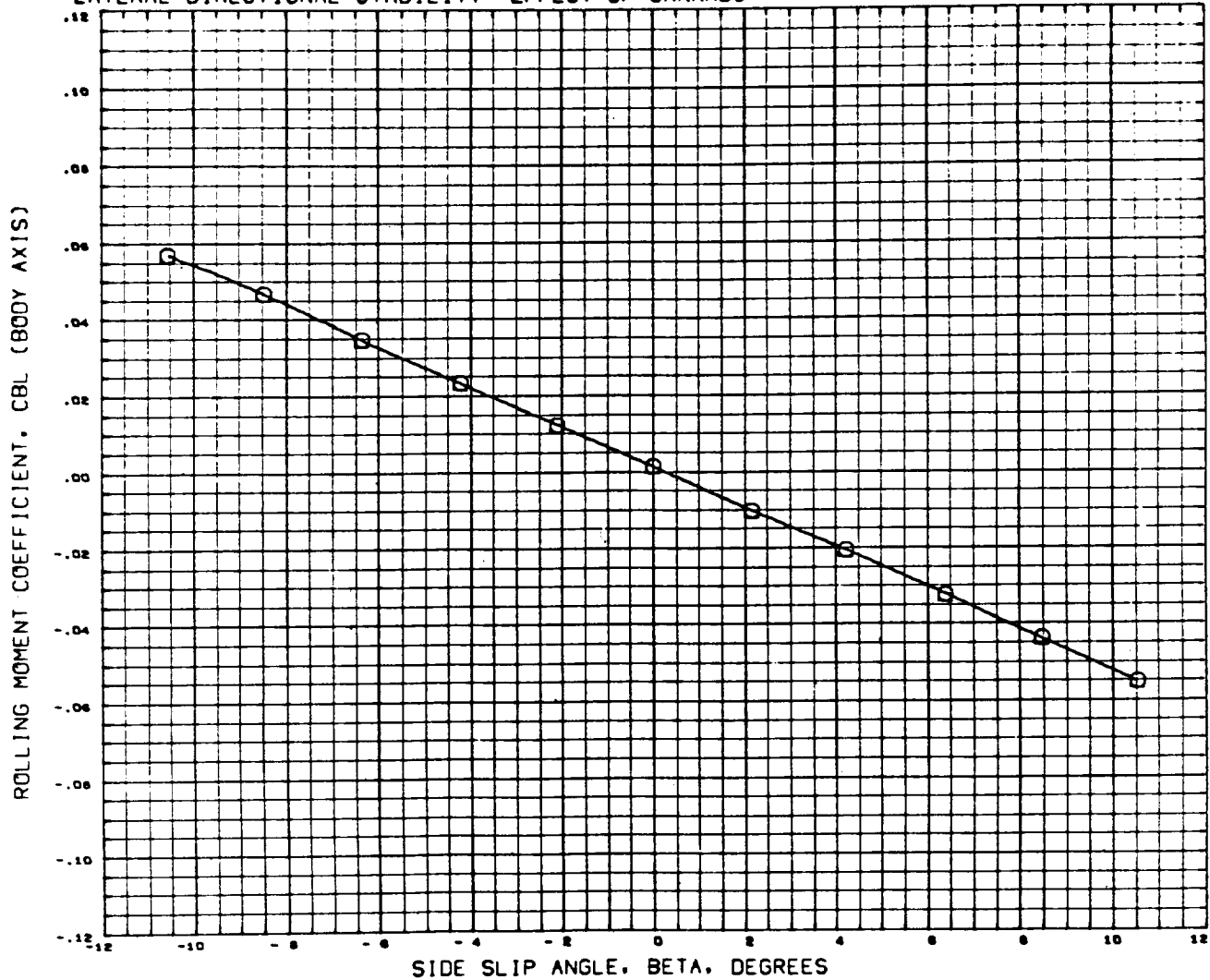
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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES		REFERENCE INFORMATION	
O		1.992		ALPHA	15.000	DEL	0.000
				DER	0.000	ELEVTR	0.000
				ATLRON	0.000	CANARD	- 20.000
DATA HIST. CODE *E							
M496-MSFC		AR1198I-3		MODEL		W6HB2C12V2 (E3838H) 06 SEP 72	
						PAGE 416	

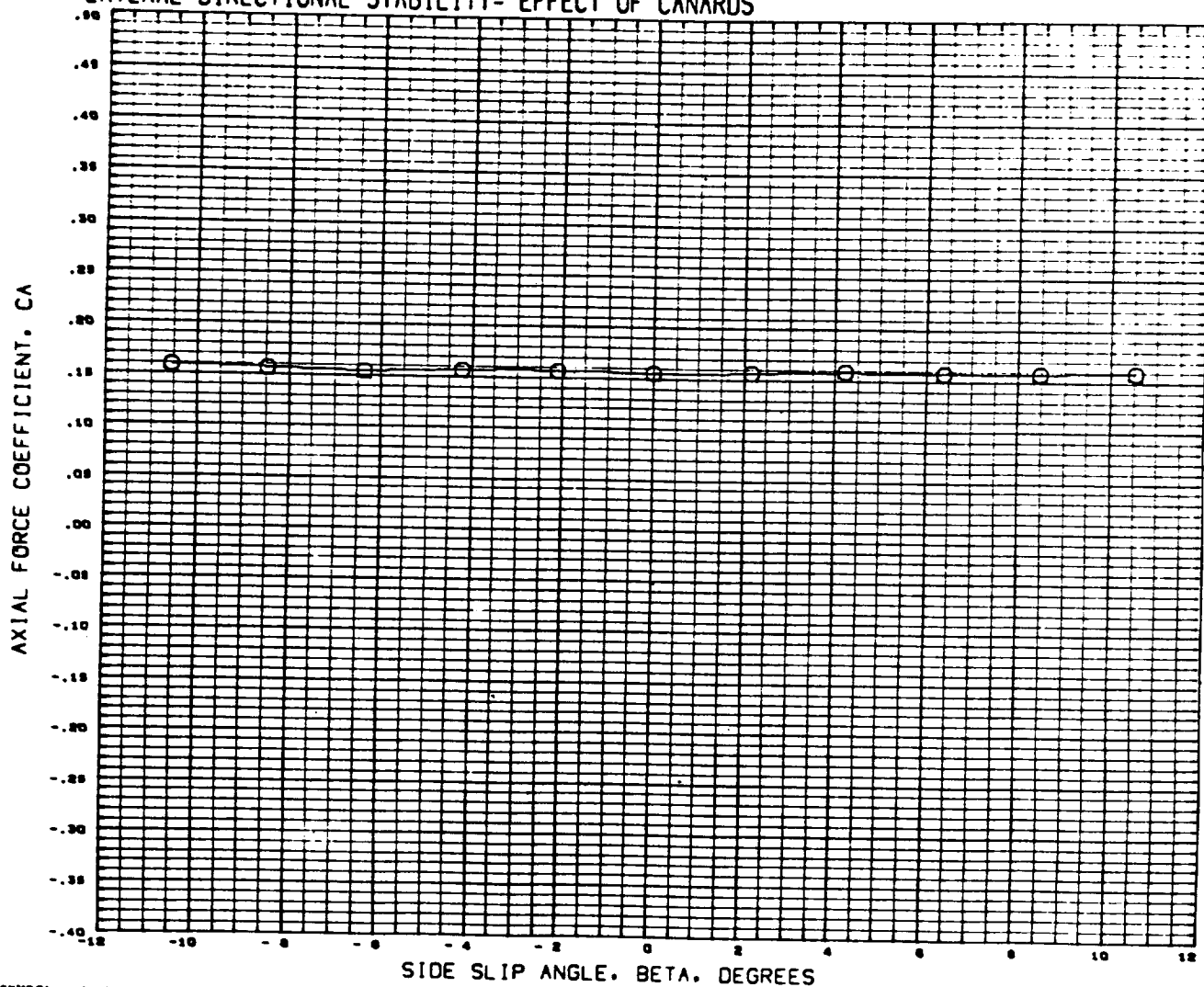
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.932		ALPHA	15.000	DEL	0.000	SREF	4.6225	83. IN.
				DER	0.000	ELEVTR	0.000	LRFP	1.9360	IN.
				ATLROH	0.000	CANARD	- 20.000	BRFP	4.3000	IN.
								YMRP	2.4000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.952

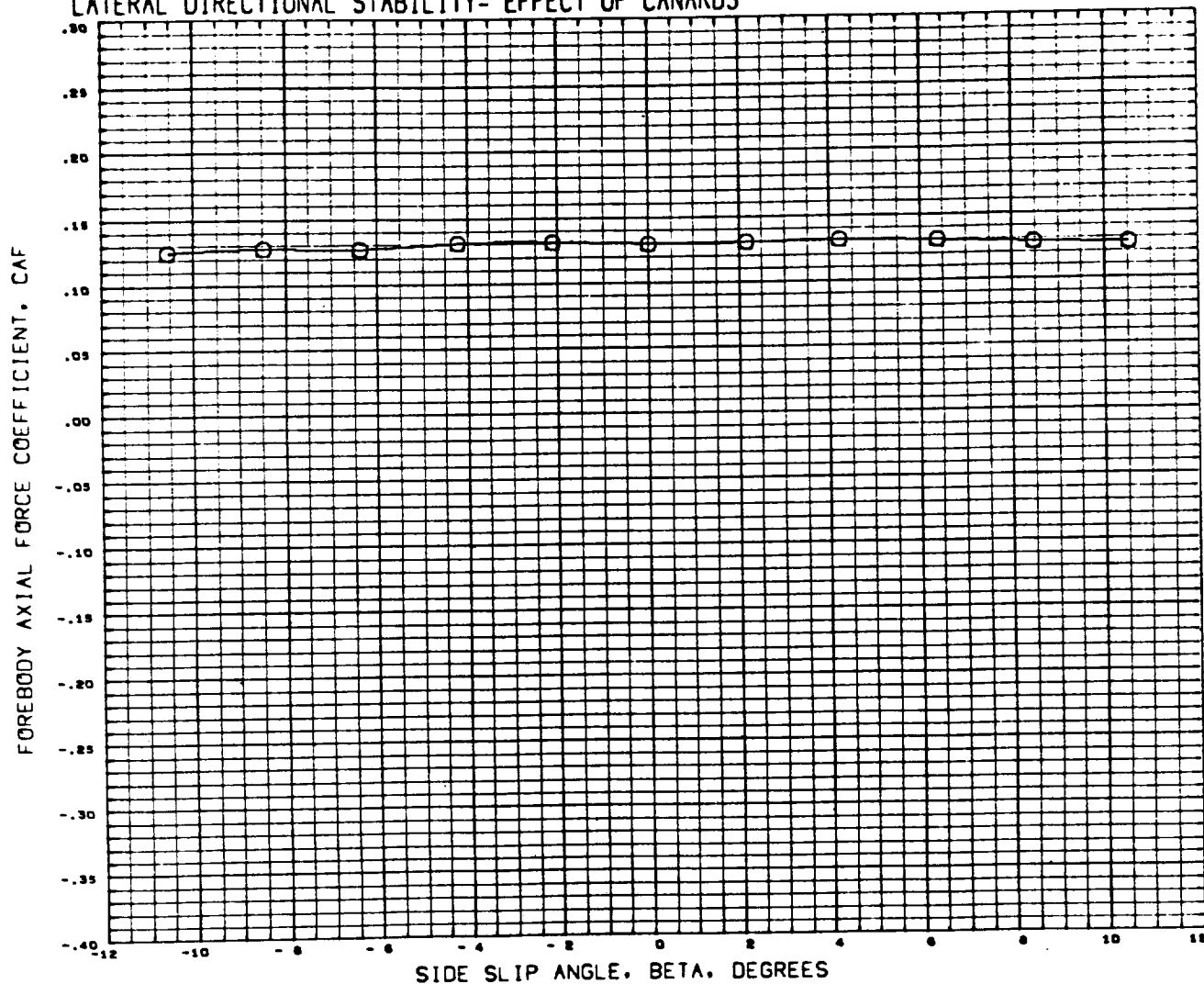
ALPHA	15.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	-20.000

DATA HIST. CODE *E

REFERENCE INFORMATION

SREF	4.6225	SQ. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XWRP	2.4000	IN.
YWRP	0.0000	IN.
ZWRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH
 O 1.952

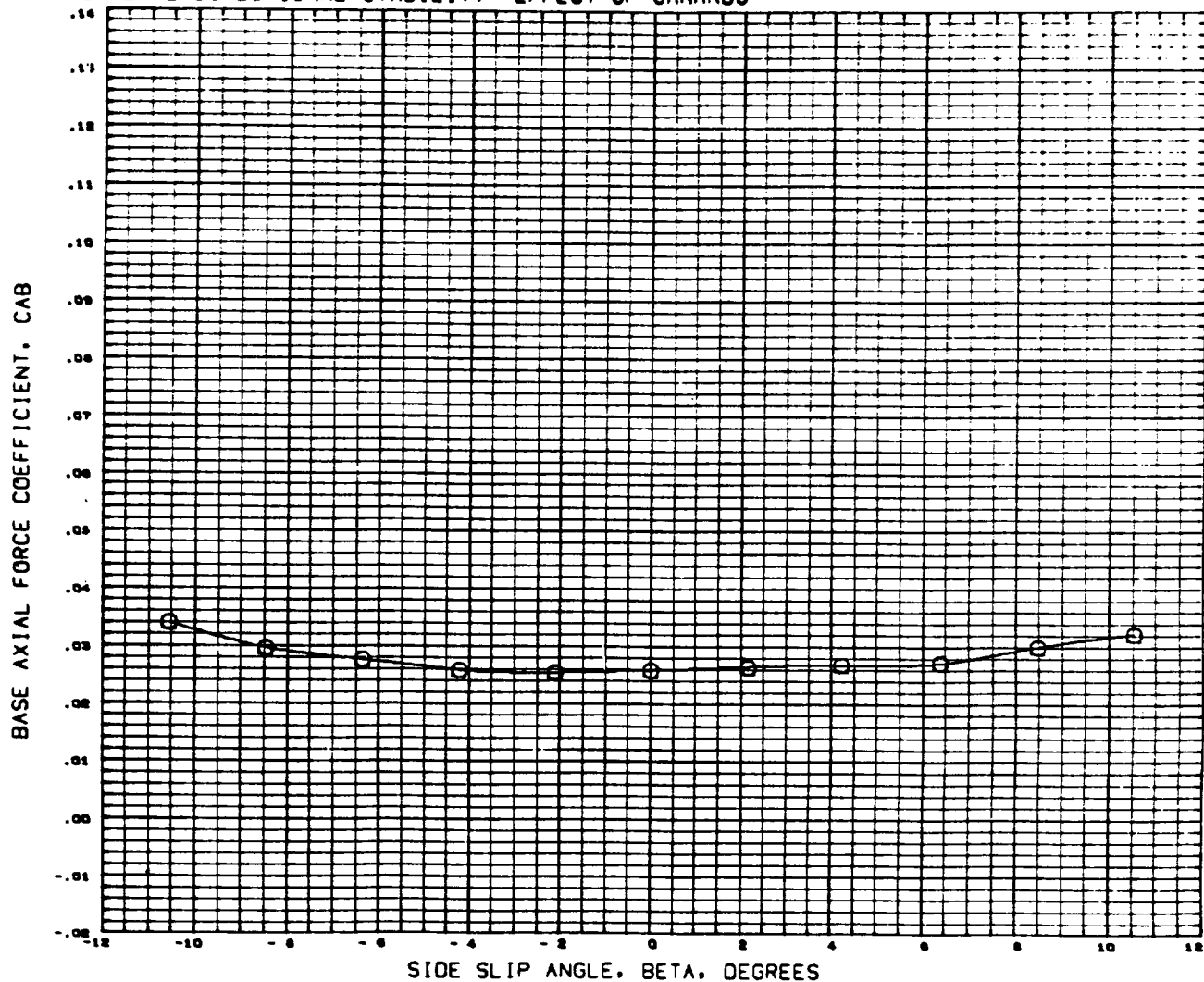
PARAMETRIC VALUES			
ALPHA	15.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	-20.000

REFERENCE INFORMATION		
SREF	4.6225	sq. in.
LREF	1.8560	in.
BREF	4.3000	in.
XHRP	2.4000	in.
YHRP	0.0000	in.
ZHRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E3838H) 06 SEP 72 PAGE 419

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



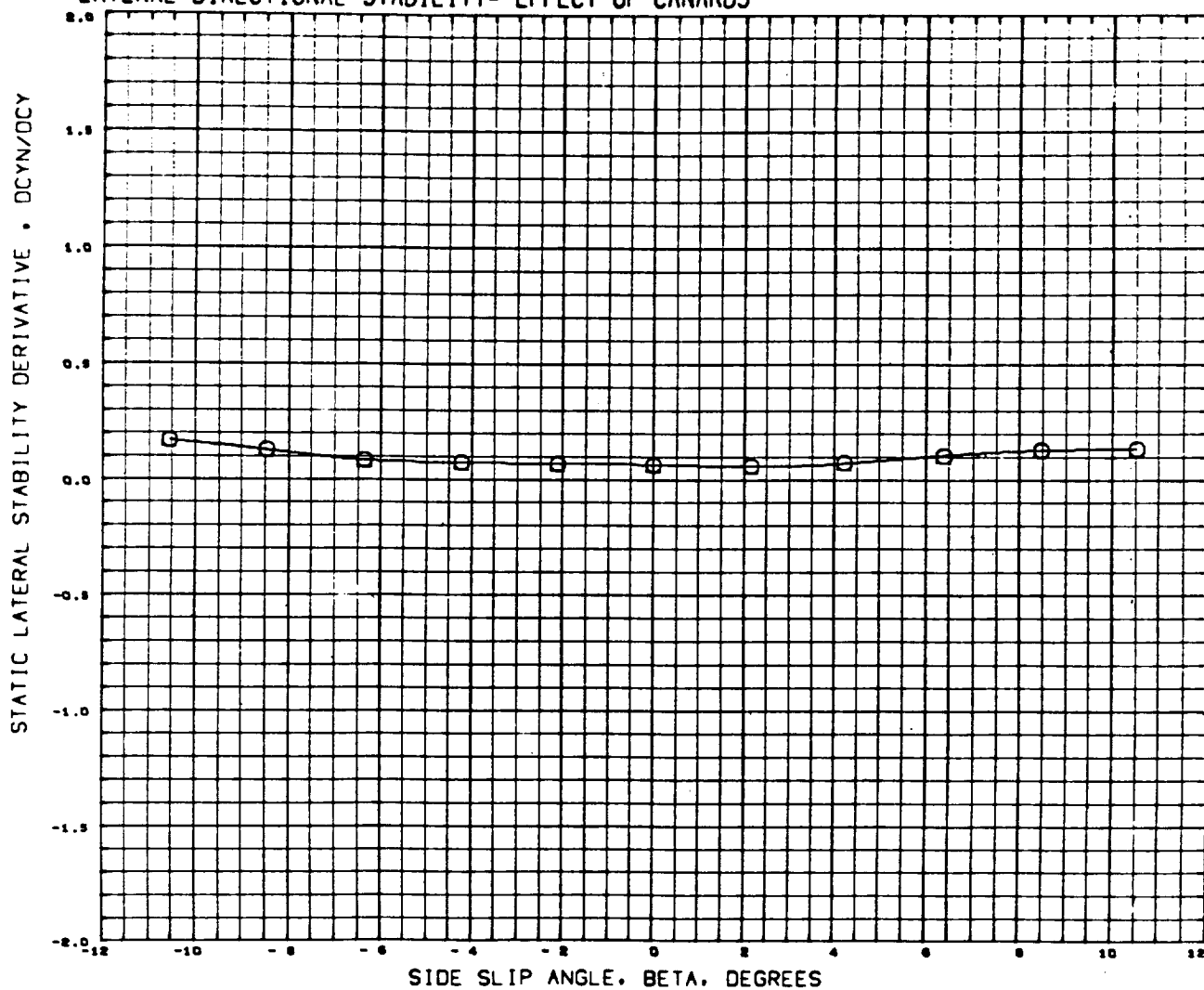
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O		1.932		ALPHA	15.000	DEL	0.000	SREF	4.6225	SQ. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
				ATLRON	0.000	CANARD	-20.000	BREF	4.3000	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E3838H) 06 SEP 72 PAGE 420

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.952	ALPHA	15.000	DEL	0.000	SREF	4.6225	80. IN.
		DER	0.000	ELEVTR	0.000	LRFP	1.5360	IN.
		AILRON	0.000	CANARD	- 20.000	BRFP	4.3000	IN.
						XRFP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

Graph showing Lateral Directional Stability (Y-axis) versus Percentage of Canard (X-axis). The Y-axis ranges from -0.40 to 0.40, and the X-axis ranges from 0 to 1.0. The data points show a positive linear relationship, indicating that lateral directional stability increases as the percentage of canard increases.

Percentage of Canard	Lateral Directional Stability
0.35	0.08
0.40	0.09
0.45	0.10
0.50	0.11
0.55	0.12
0.60	0.13
0.65	0.14
0.70	0.15
0.75	0.16
0.80	0.17
0.85	0.18
0.90	0.19
0.95	0.20
1.00	0.21

REFERENCE INFORMATION		
SREF	4.6223	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *C

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E3838H) 06 SEP 72 PAGE 422

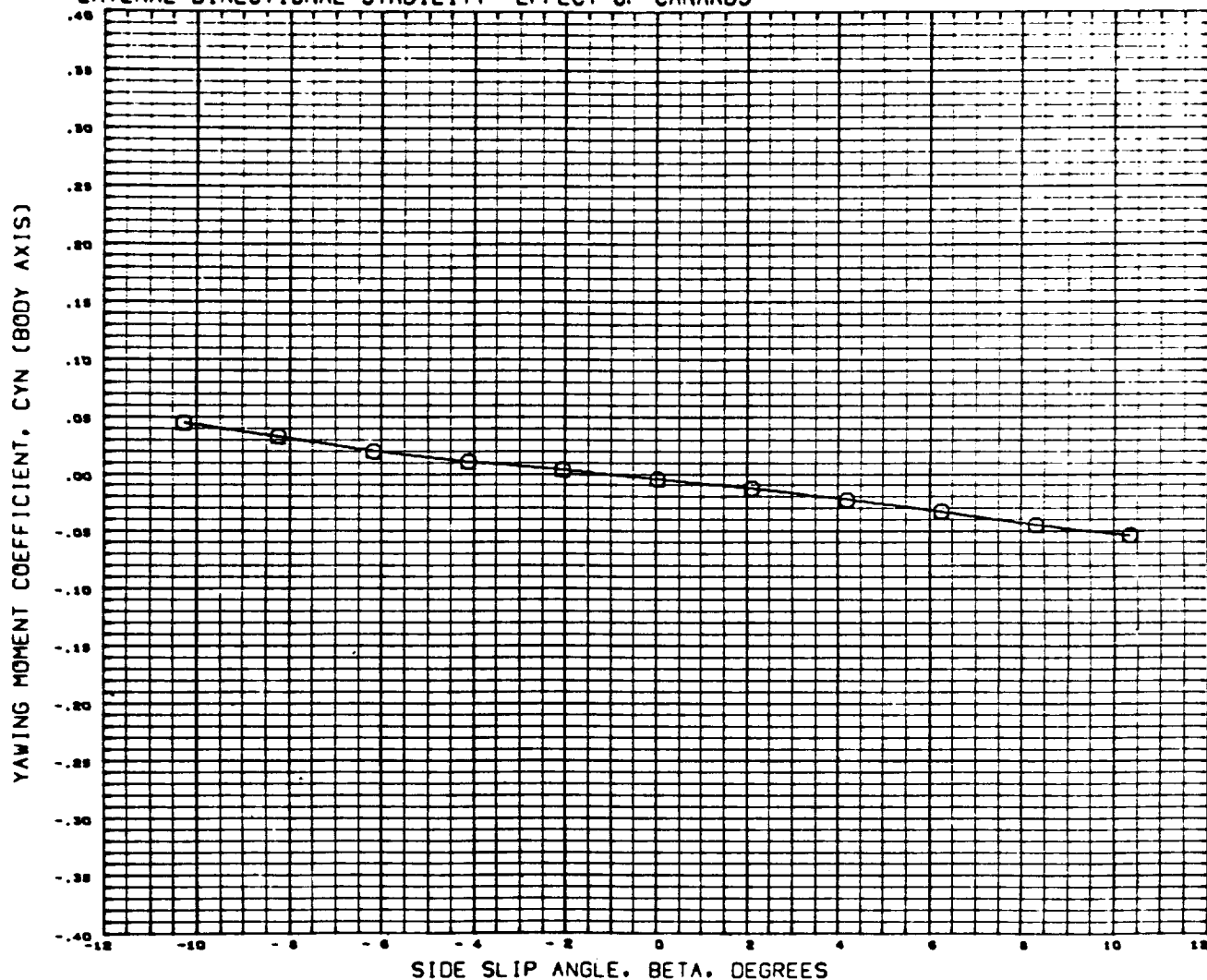
Graph showing the Lateral Force Coefficient, C_Y , versus the Side Slip Angle, β , in degrees. The data points show a linear relationship, indicating a constant lateral force coefficient per degree of side slip angle.

Side Slip Angle, β , Degrees	Lateral Force Coefficient, C_Y
-10	0.33
-8	0.27
-6	0.20
-4	0.13
-2	0.06
0	-0.03
2	-0.10
4	-0.17
6	-0.24
8	-0.31
10	-0.38

SRF	4.6225	SQ. IN.
LRF	1.5360	IN.
GRF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

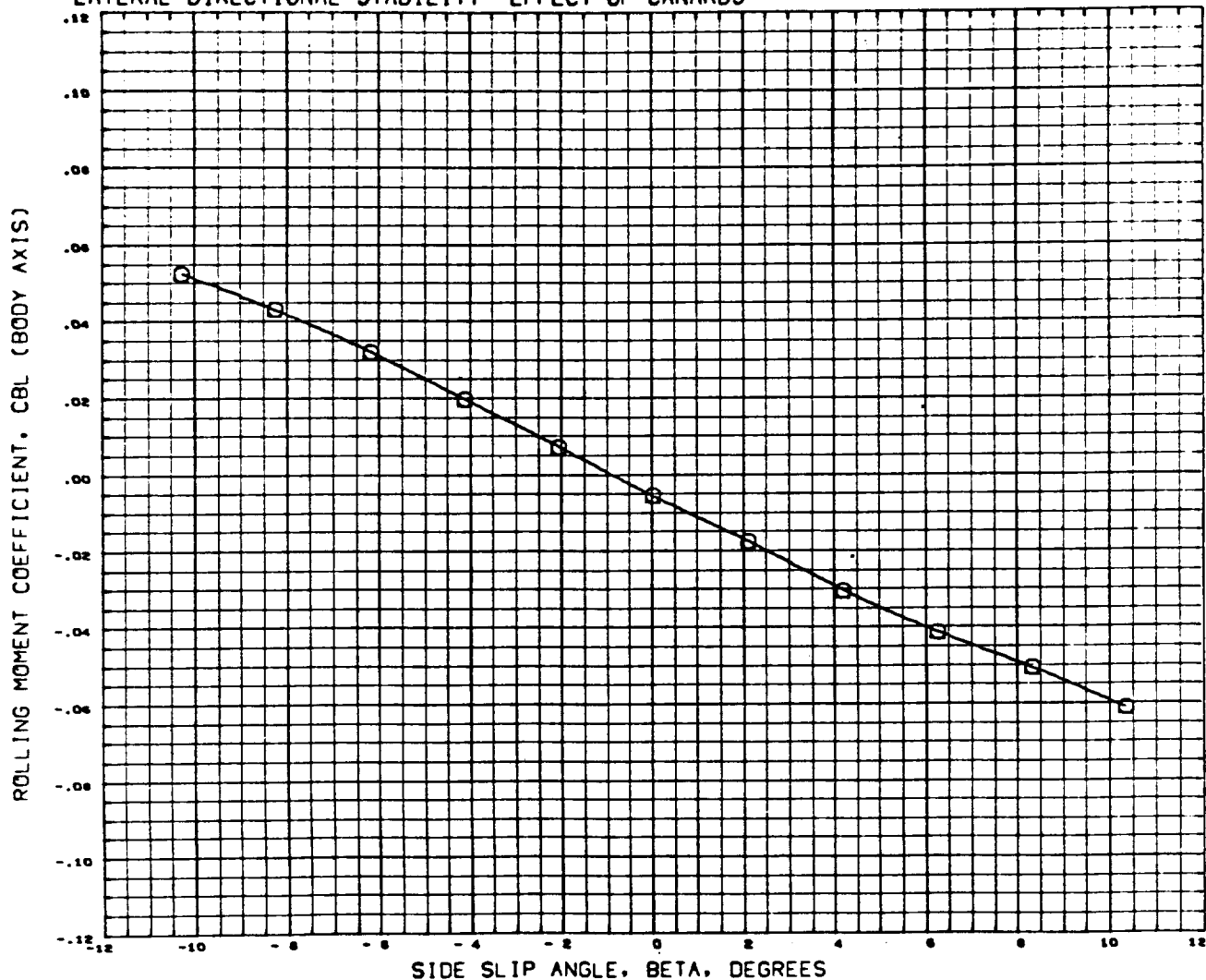


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION			
○	3.480	ALPHA	30.000	DEL	0.000	SREF	4.6223	50. IN.	
		DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.	
		AILRON	0.000	CANARD	-40.000	BREF	4.3000	IN.	
						XHRP	2.4000	IN.	
						YHRP	0.0000	IN.	
						ZHRP	0.0000	IN.	
						SCALE	0.0025		

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W6HB2C12V2 (E3839I) 06 SEP 72 PAGE 424

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

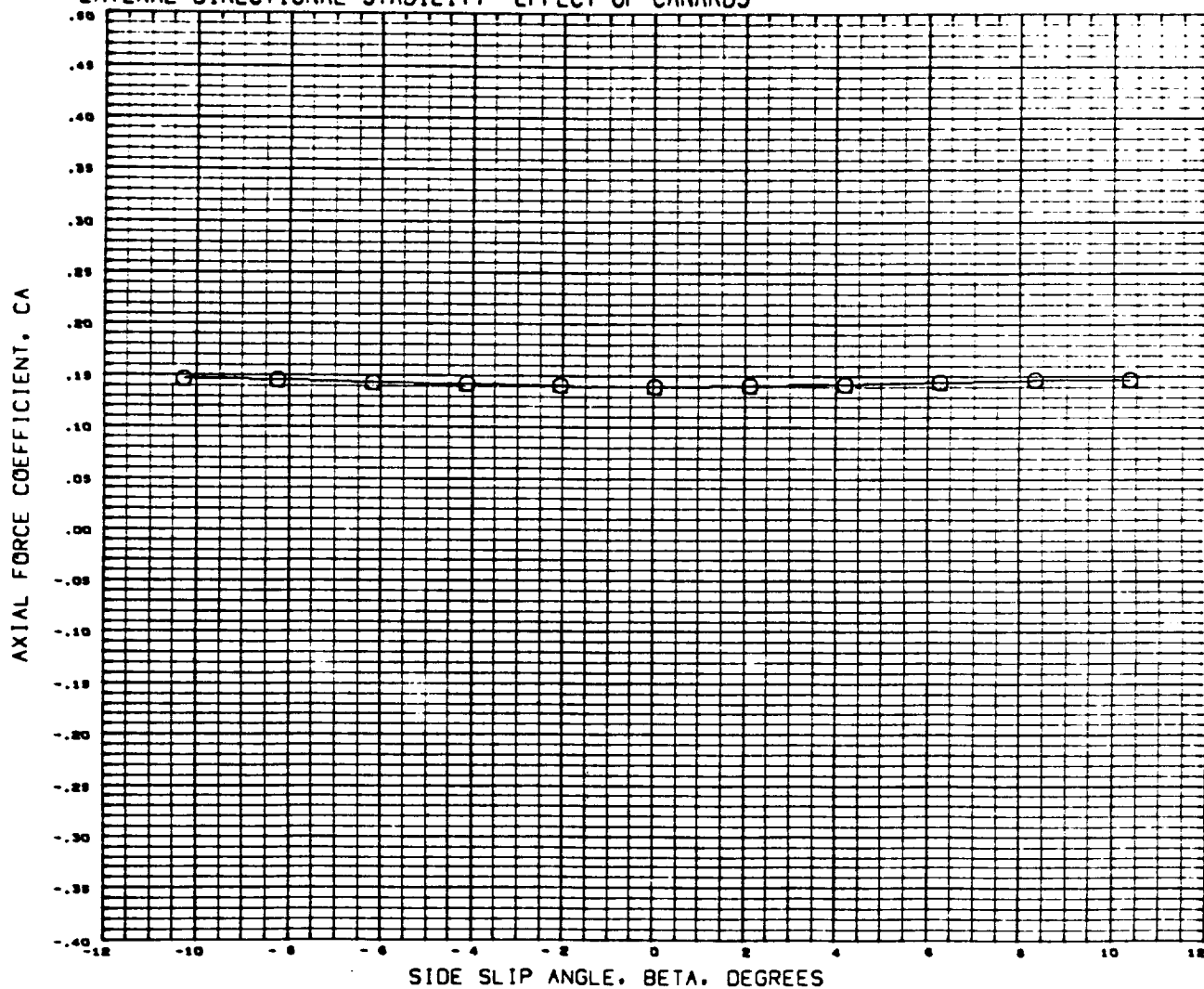


SYMBOL		PARAMETRIC VALUES					REFERENCE INFORMATION		
O	MACH	3.480	ALPHA	30.000	DEL	0.000	SREF	4.6225	30. IN.
			DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
			AILRON	0.000	CANARD	- 40.000	BREF	4.3000	IN.
							XMRP	2.4000	IN.
							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E38391) 06 SEP 72 PAGE 425

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

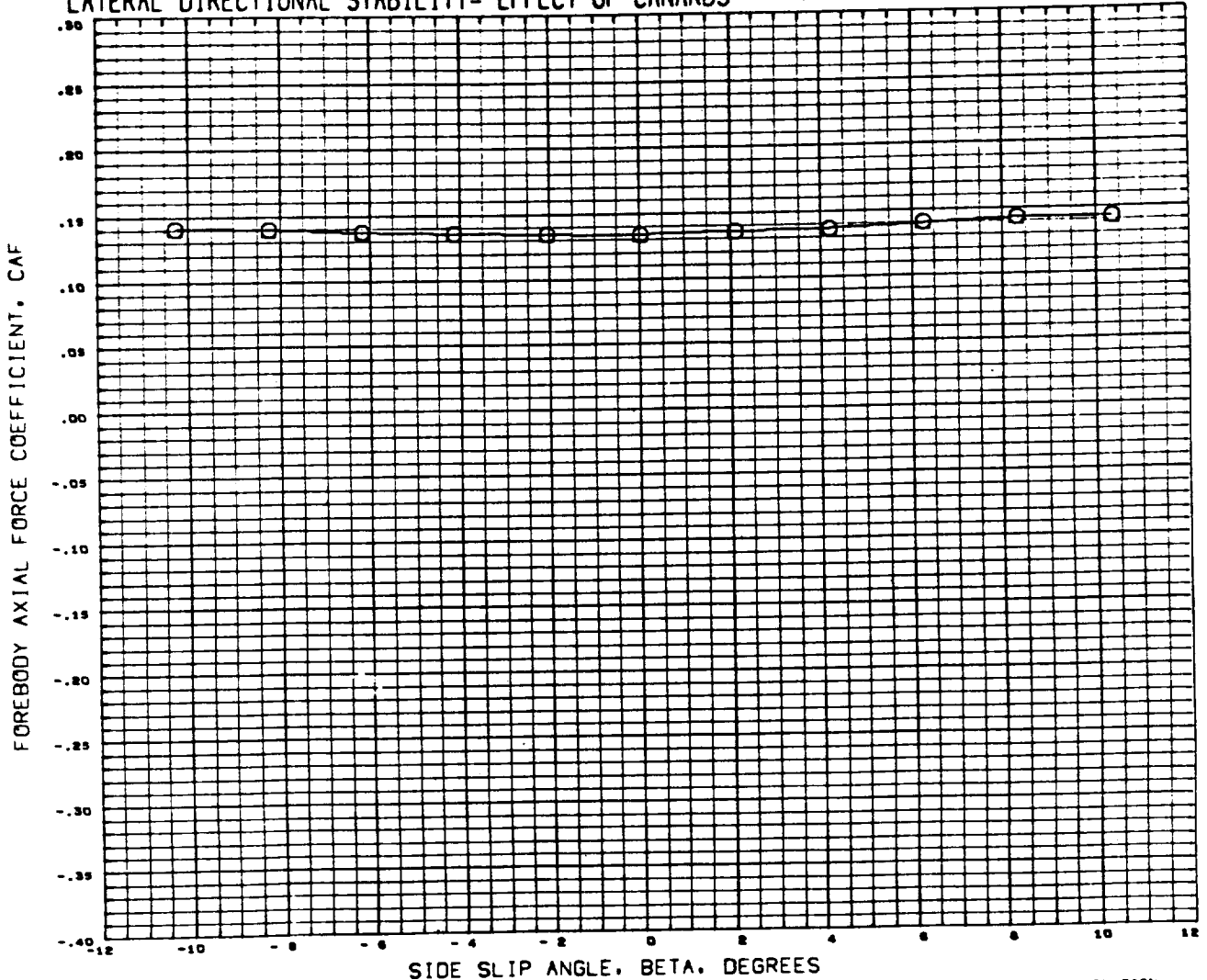


SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
Q	MACH 3.480	ALPHA	30.000	DEL	0.000	SRF	4.6225	SQ. IN.
		DER	0.000	ELEVTR	0.000	LRFP	1.5380	IN.
		AILRON	0.000	CANARD	- 40.000	BRFP	4.3000	IN.
						ZMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA MIST. CODE 0E

M496-MSFC AR1198I-3 MODEL W6HB2C12V2 (E3839I) 06 SEP 72 PAGE 426

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES			
○	3.480	ALPHA	30.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
BREF	4.6225	30. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E38391) 06 SEP 72 PAGE 427

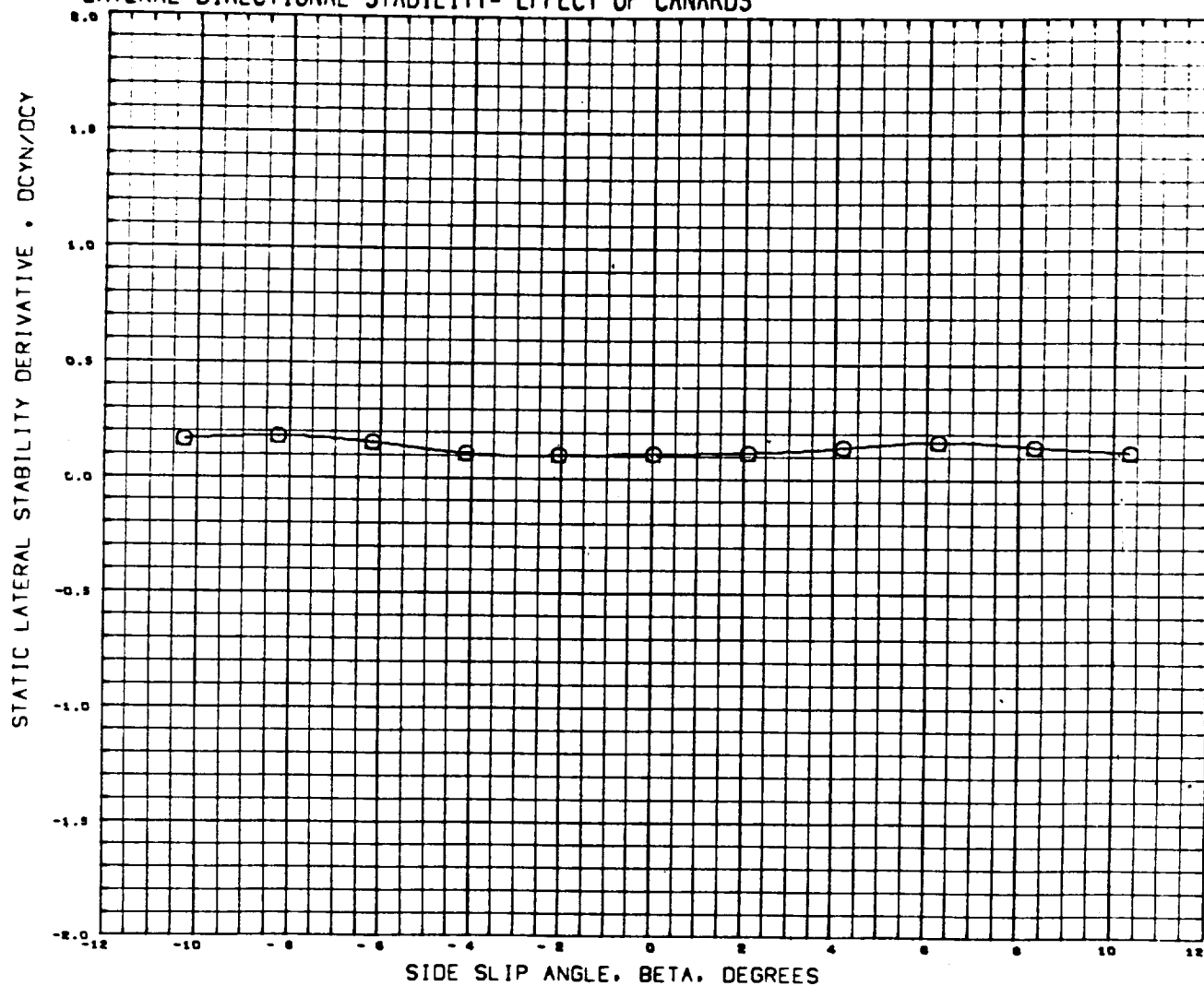
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	3.480	ALPHA	30.000	DEL	0.000	SREF	4.6225	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
		AILRON	0.000	CANARD	-40.000	BREF	4.3000	IN.
						YMRP	2.4000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE 4E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

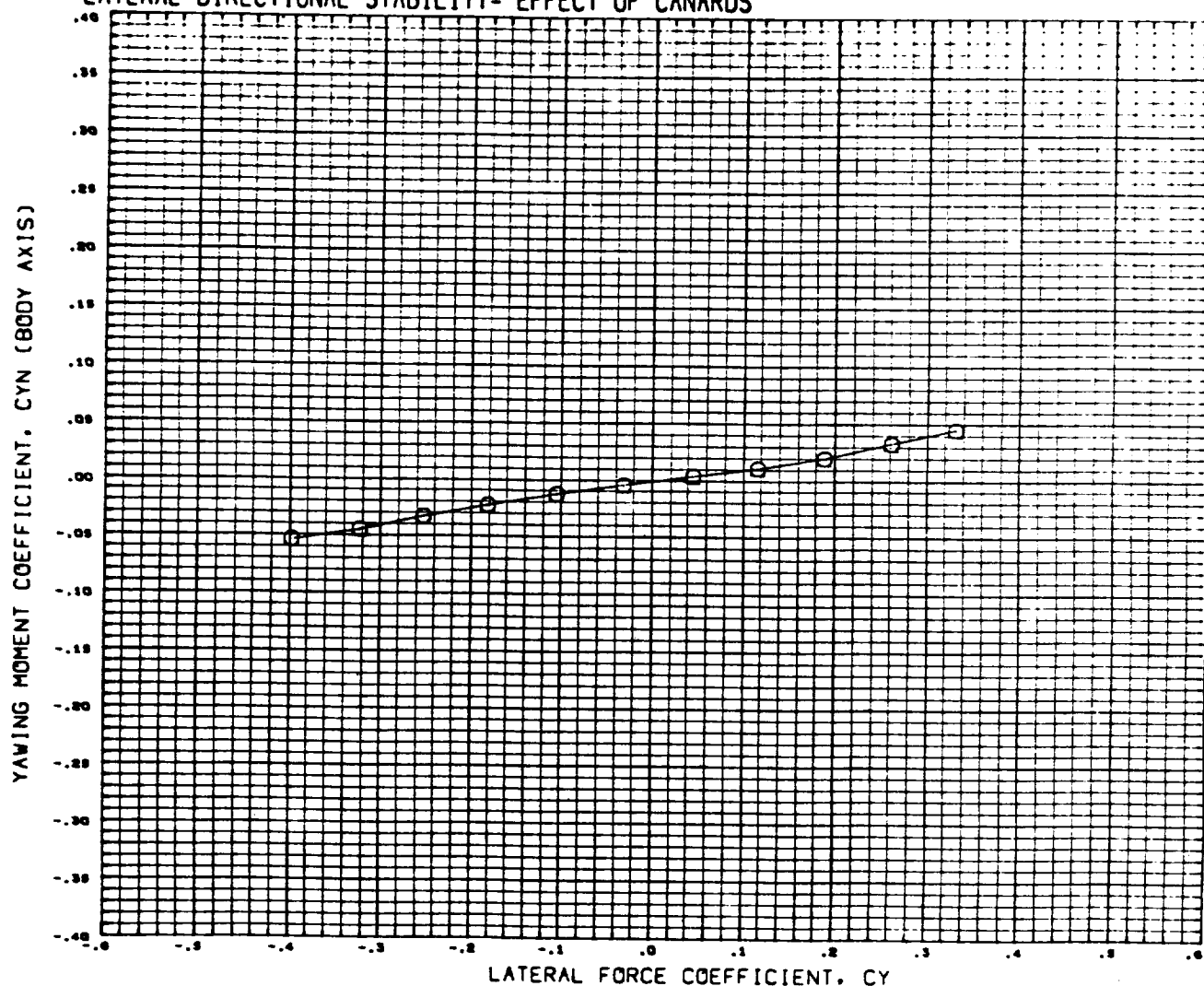


SYMBOL \bigcirc MACH 3.480
 PARAMETRIC VALUES
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

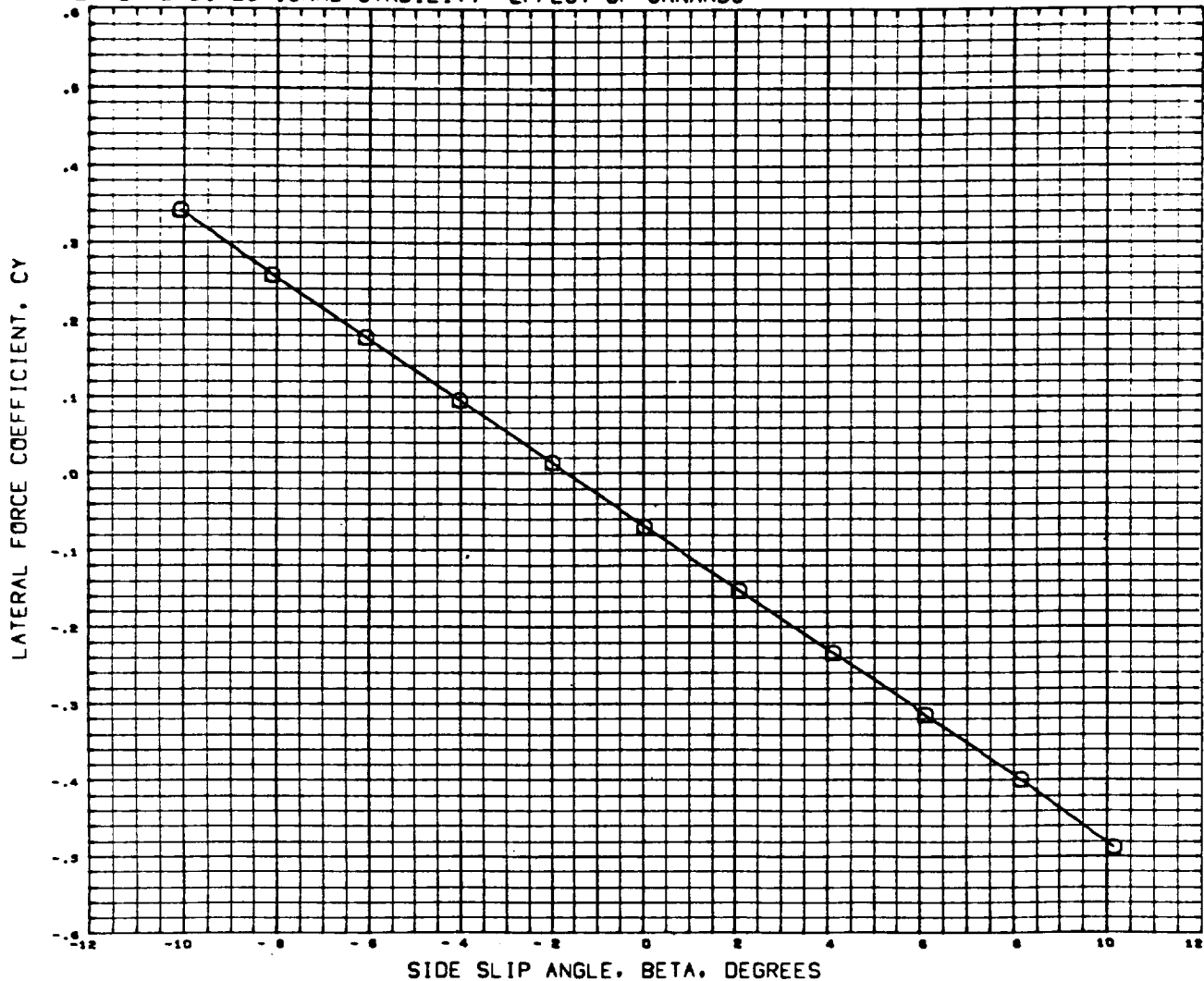


SYMBOL \bigcirc MACH 3.400
 PARAMETRIC VALUES
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE *E

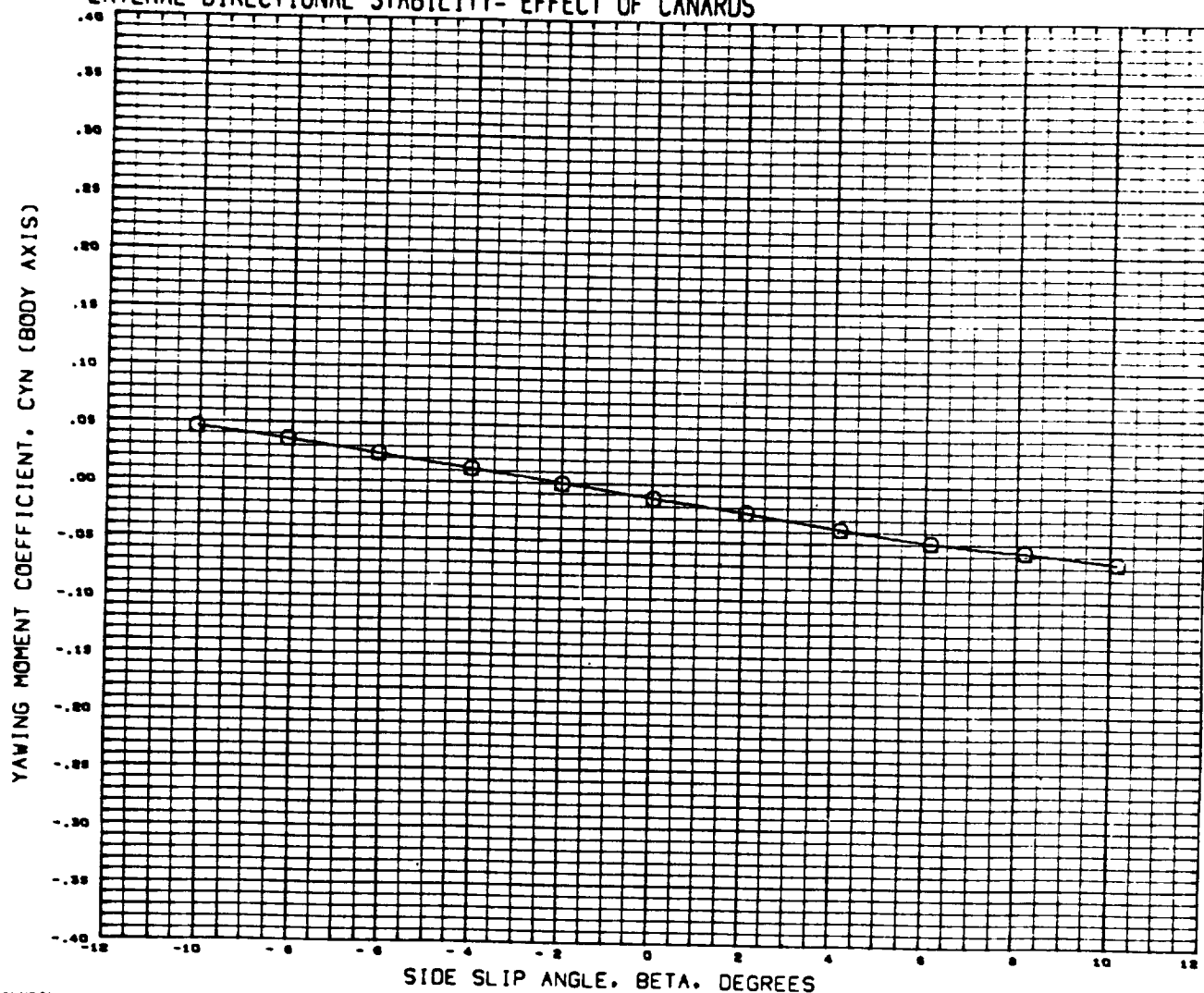
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	SCALE
○	4.959	50.000	0.000	0.000	- 50.000	4.6225	1.5360	0.0025
		DER				SREF	4.3000	0.0000
		AILRON				XMRP	2.4000	0.0000
						YMRP	0.0000	0.0000
						ZMRP	0.0000	0.0000
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

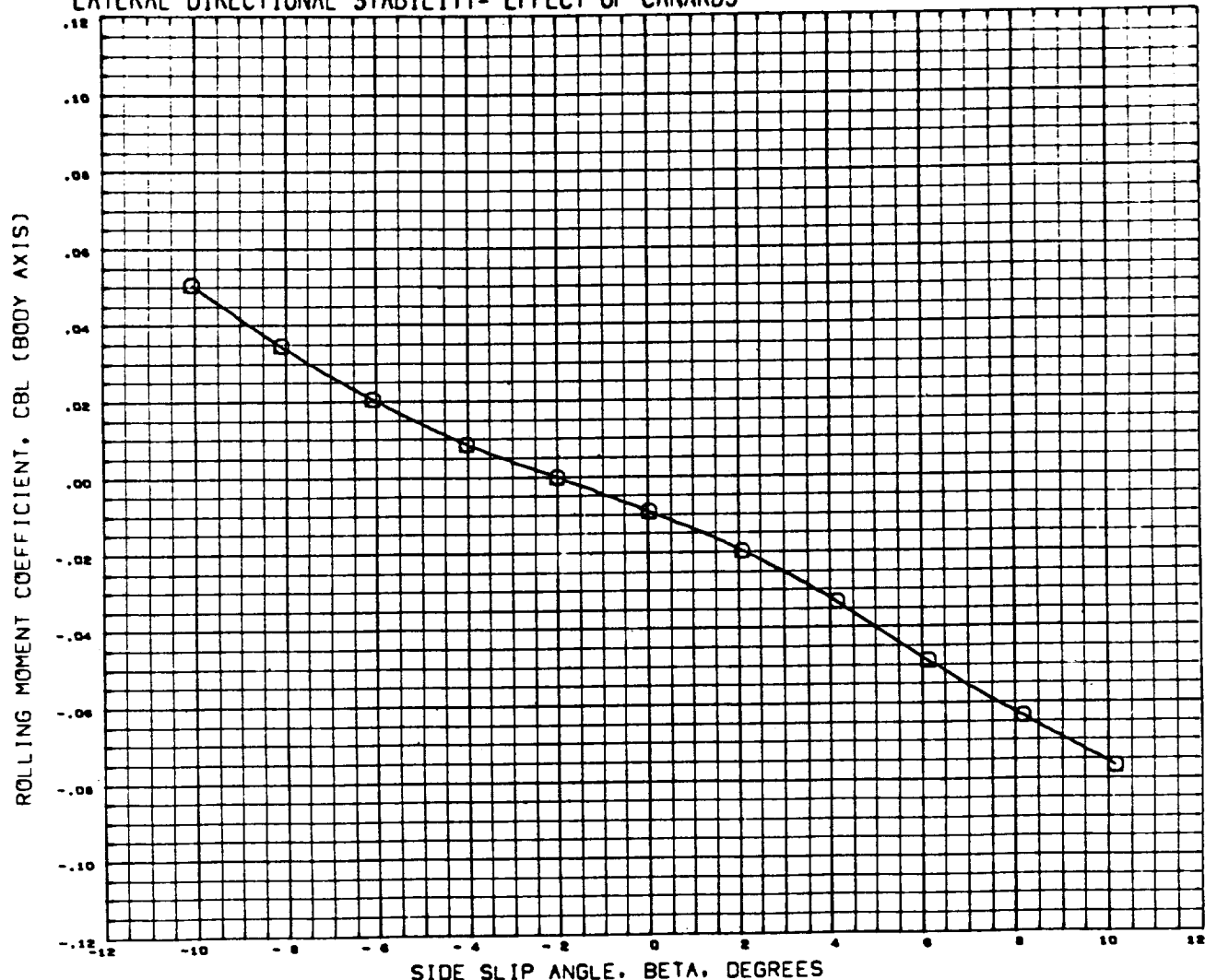


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.999	ALPHA	50.000	DEL	0.000	SREF	4.6225	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		AILRON	0.000	CANARD	-60.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6H82C12V2 (E3840J) 06 SEP 72 PAGE 432

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

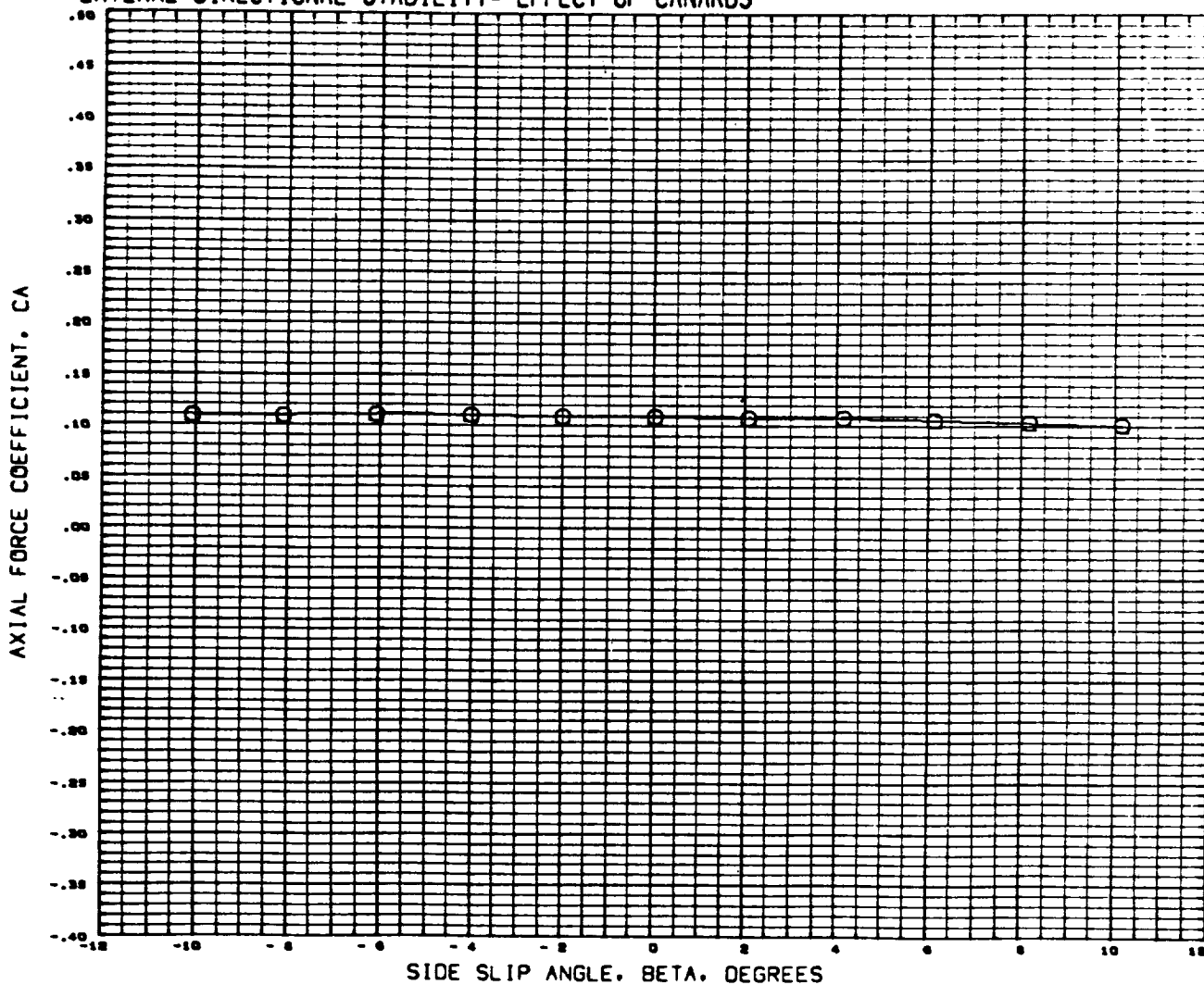


SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		4.959		ALPHA	50.000	DEL	0.000	SREF	4.6225	50. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
				ATLRON	0.000	CANARD	- 60.000	BREF	4.3000	IN.
								XWRP	2.4000	IN.
								YWRP	0.0000	IN.
								ZWRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12V2 (E3840J) 06 SEP 72 PAGE 433

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

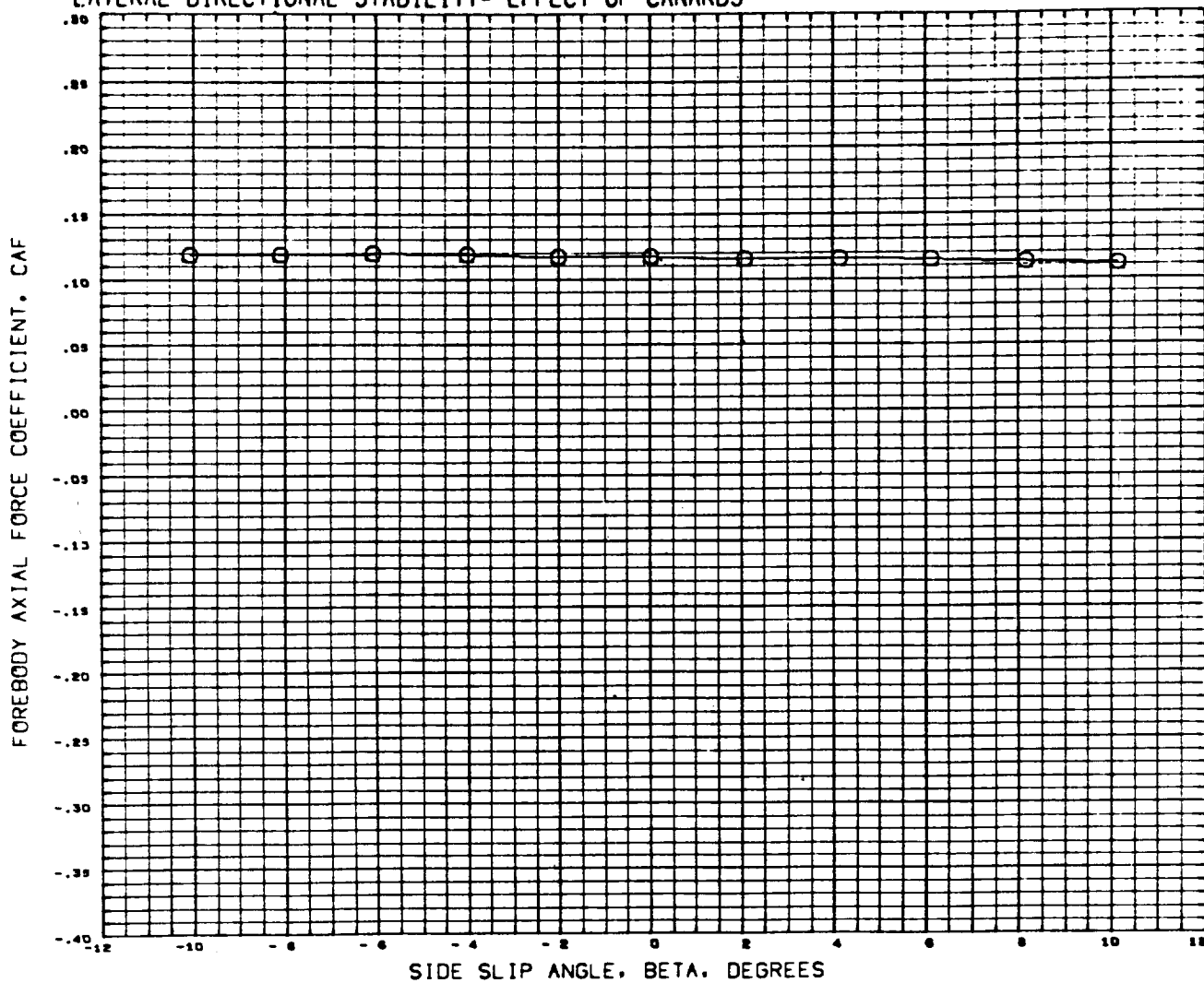


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		ATLRON	0.000	CANARD	- 60.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6H82C12V2 (E3840J) 06 SEP 72 PAGE 434

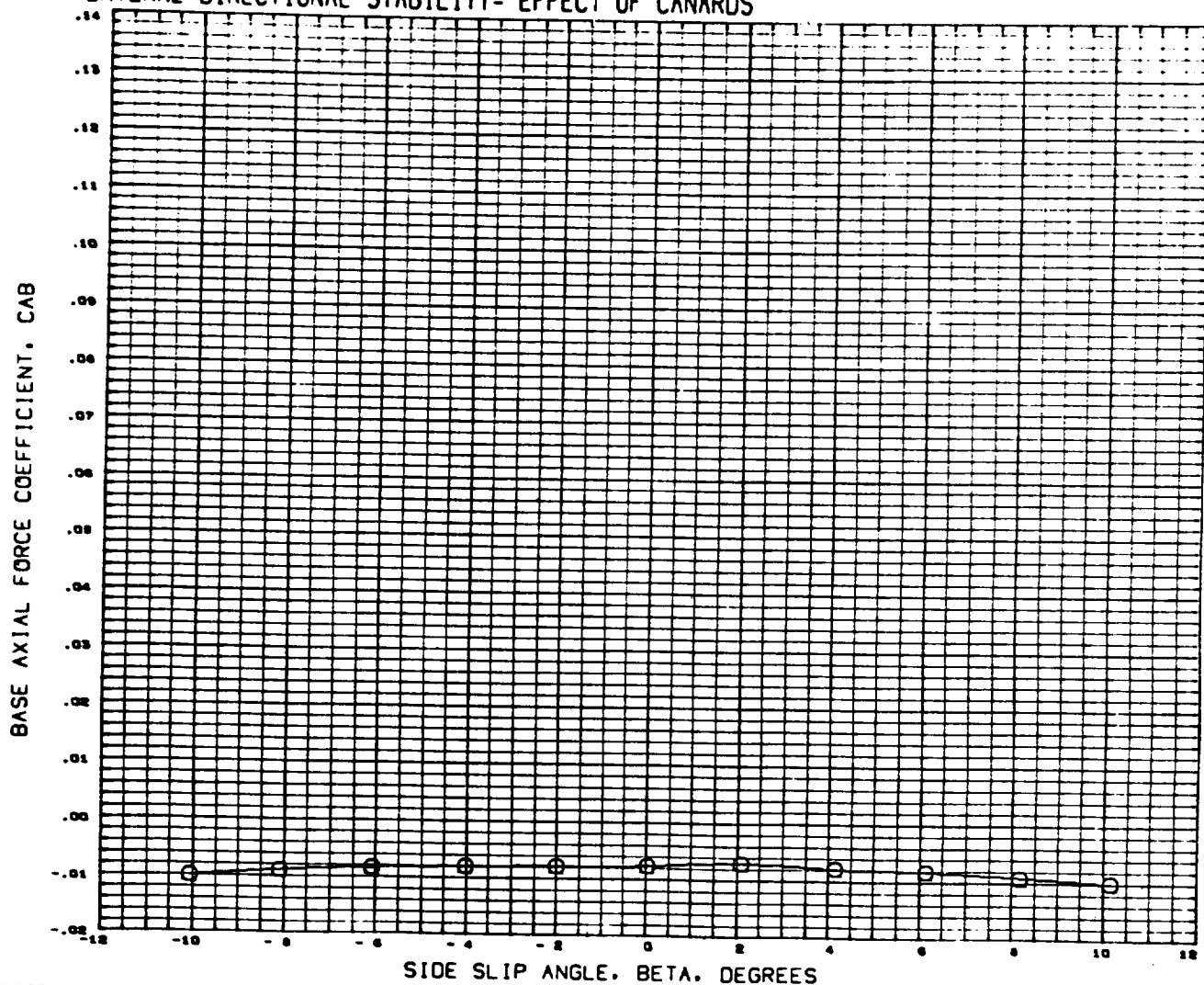
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	4.959	ALPHA	50.000	DEL	0.000	SREF	4.6225 SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.9360 IN.
		AILRON	0.000	CANARD	- 80.000	BREF	4.3000 IN.
						ZMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH
O 4.999

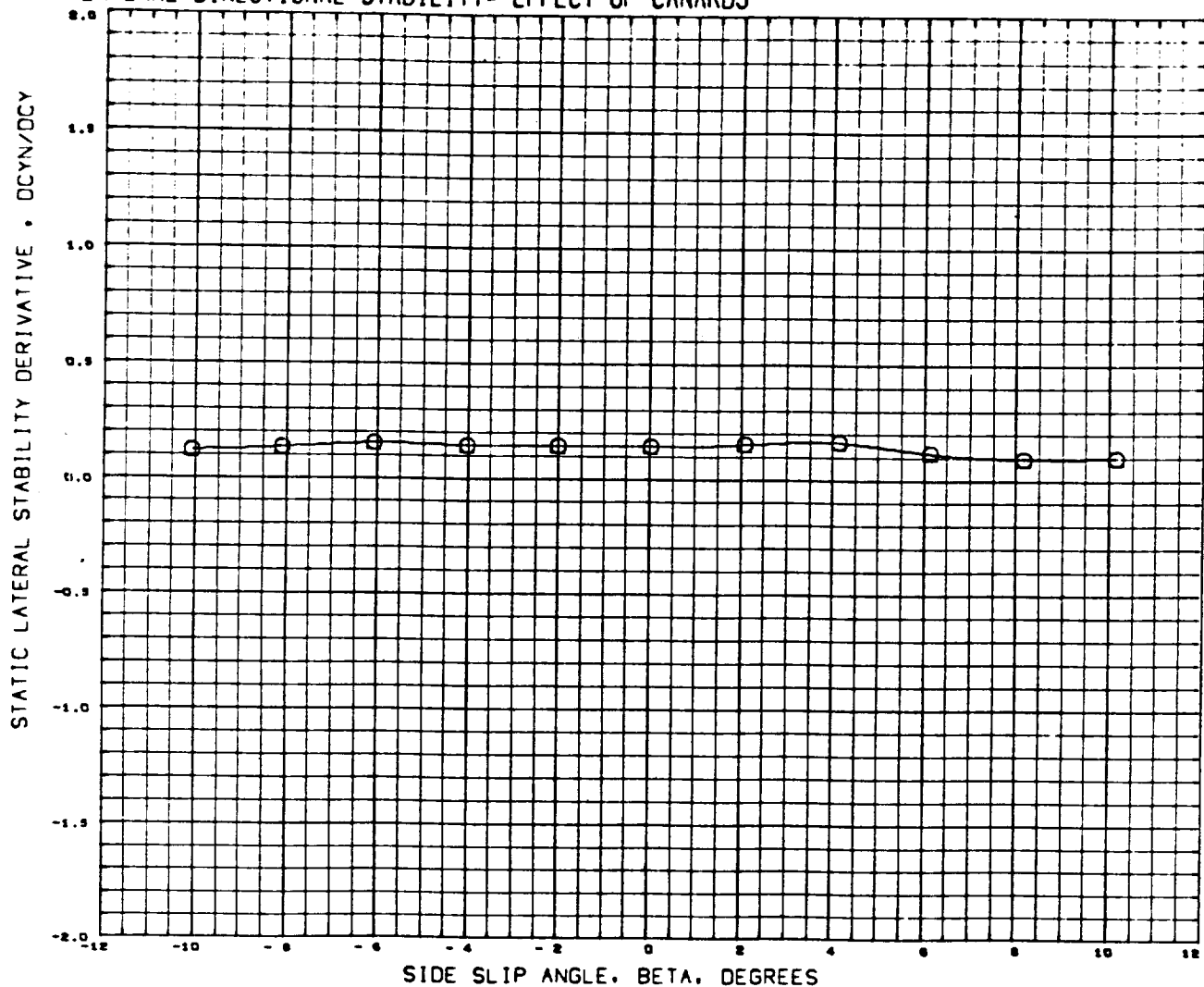
PARAMETRIC VALUES
ALPHA 50.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATLRON 0.000 CANARD - 60.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.3360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

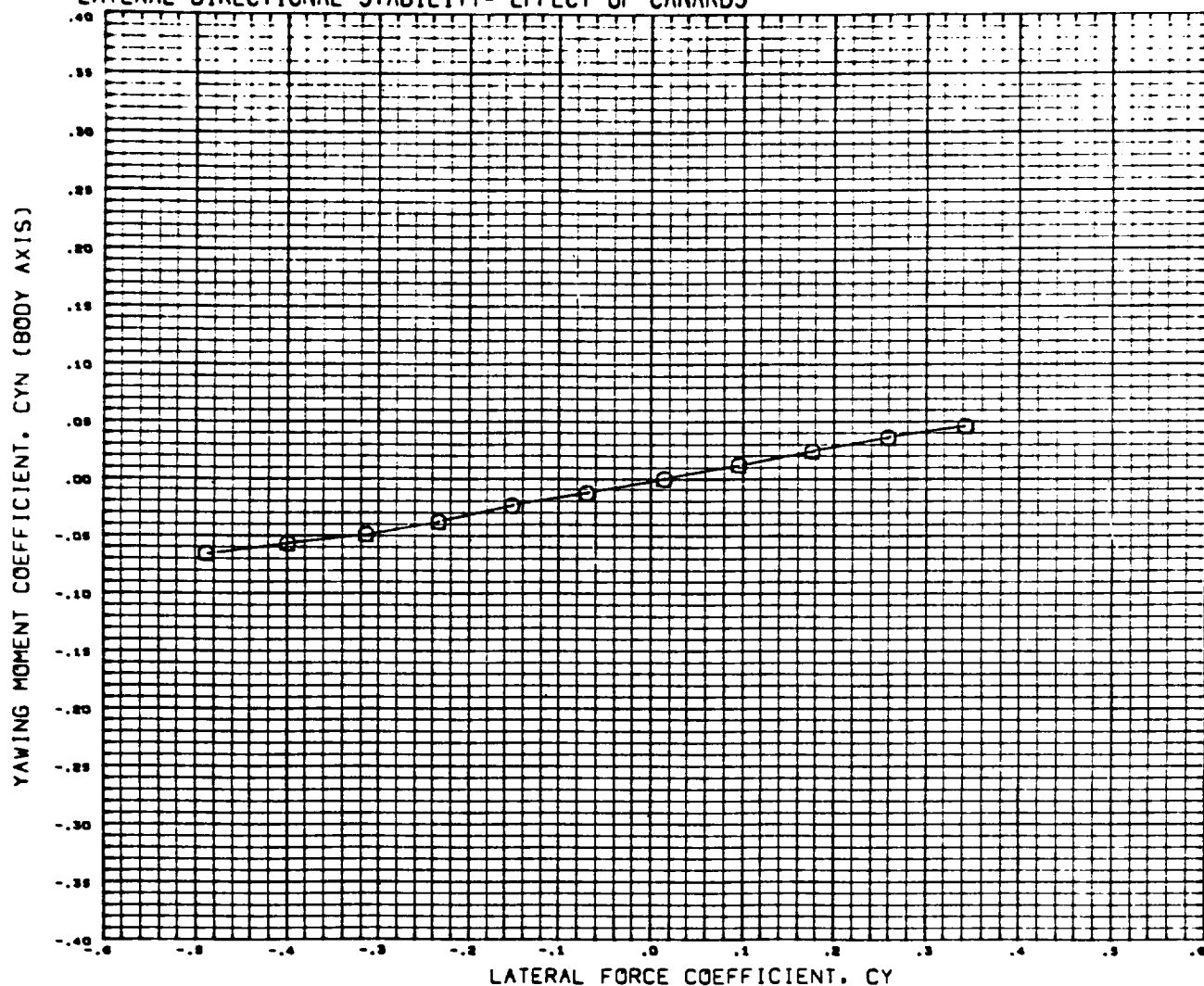


SYMBOL \bigcirc MACH 4.959
 PARAMETRIC VALUES
 ALPHA 50.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 60.000

REFERENCE INFORMATION
 SREF 4.6225 20. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.999

PARAMETRIC VALUES			
ALPHA	50.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	- 60.000

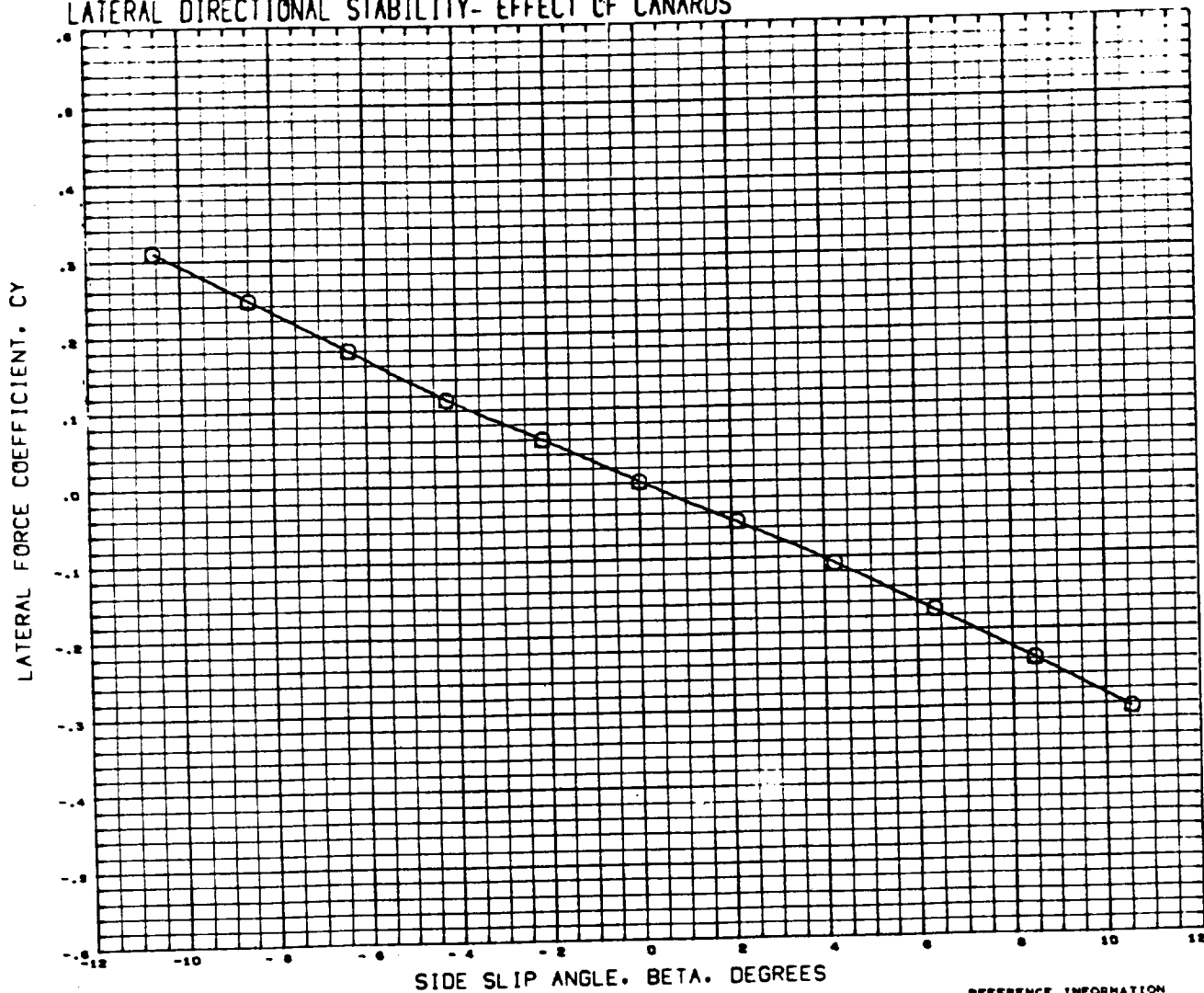
REFERENCE INFORMATION

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LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR1198(-3 MODEL W6HB2C12V2 (E3840J) 06 SEP 72 PAGE 438

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.957
 PARAMETRIC VALUES
 ALPHA 15.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
 BREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W6HB2C12

(E3834H)

06 SEP 72

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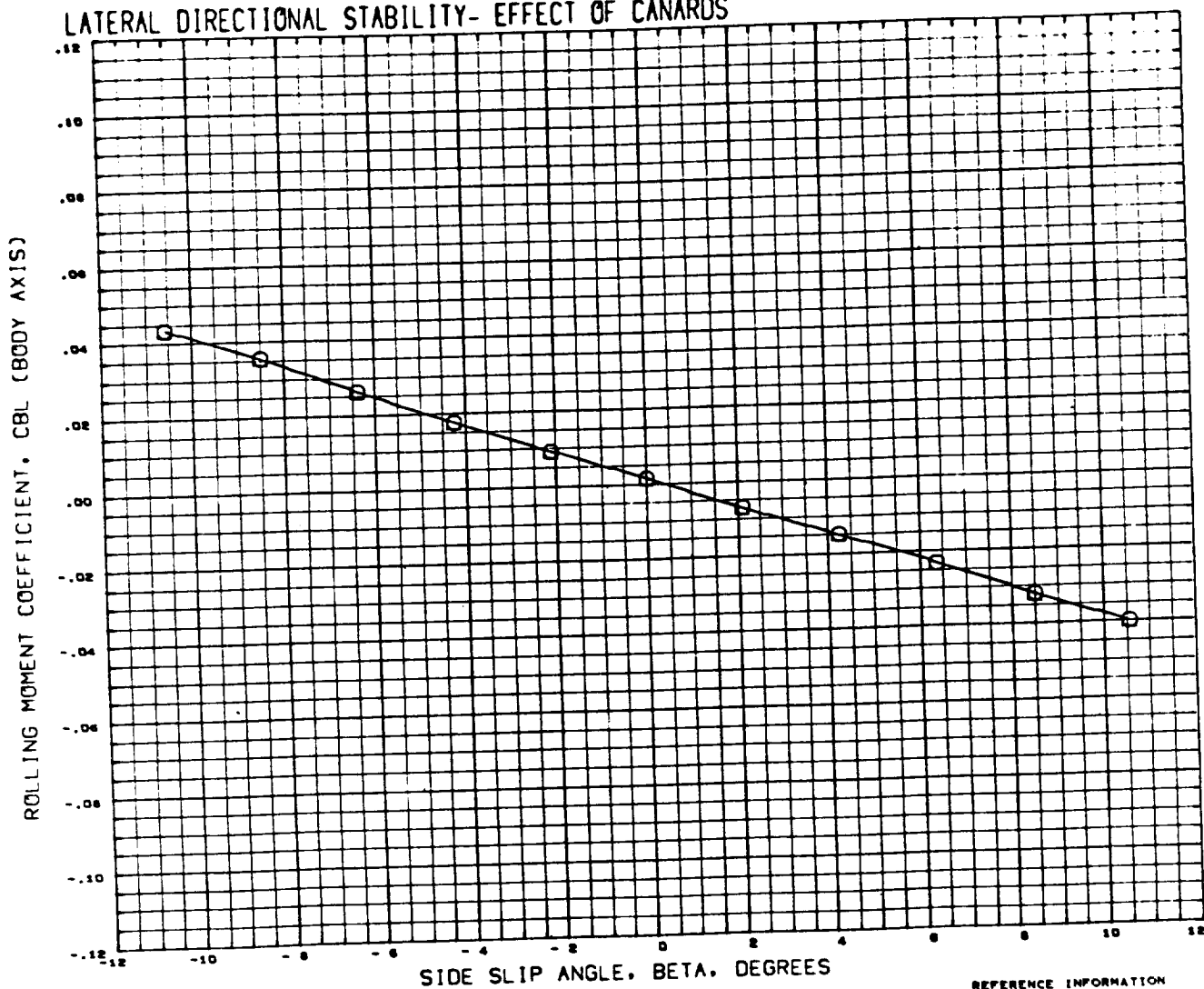
Figure 1 is a line graph showing the relationship between the logarithm of the rate of polymerization ($\log R_p$) and the logarithm of the concentration of the initiator ($\log [I]$). The y-axis represents $\log R_p$ and ranges from -4.0 to -3.6. The x-axis represents $\log [I]$ and ranges from -12 to 12. The data points are plotted as open circles, and a straight line is drawn through them, indicating a linear relationship. The slope of the line is approximately -0.05.

$\log [I]$	$\log R_p$
-10.5	-3.65
-8.5	-3.68
-6.5	-3.71
-4.5	-3.74
-2.5	-3.77
-0.5	-3.80
1.5	-3.83
3.5	-3.86
5.5	-3.89
7.5	-3.92
9.5	-3.95

REFERENCE INFORMATION		
SREF	4.6225	SG. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH
 O 1.957

PARAMETRIC VALUES
 ALPHA 15.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 QREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

4496-MSFC

AR11981-3

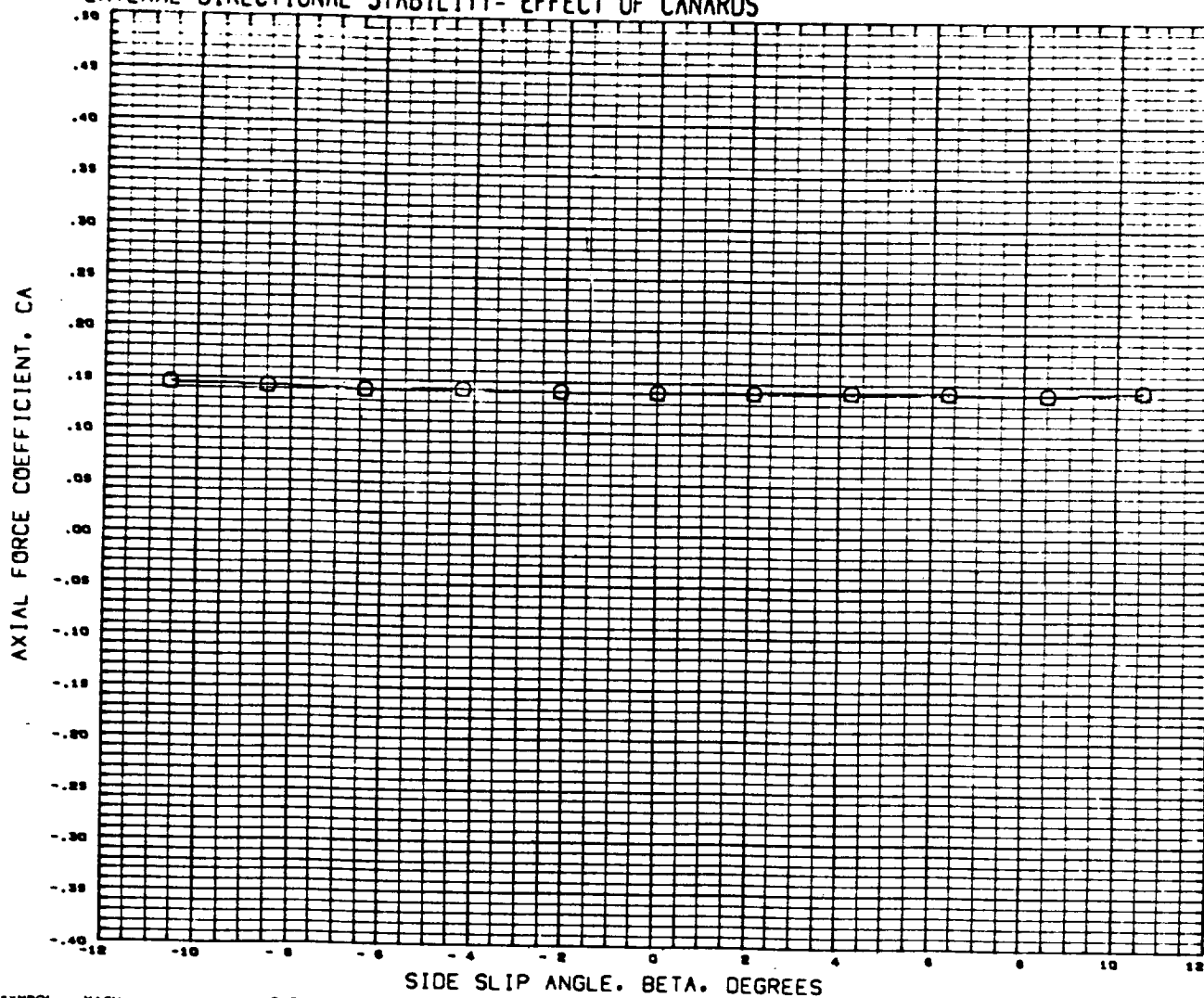
MODEL

W6HB2C12

(E3834H) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL MACH
○ 1.957

PARAMETRIC VALUES
ALPHA 15.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATLROM 0.000 CANARD - 20.000

REFERENCE INFORMATION
SREP 4.6225 30. IN.
LREP 1.5360 IN.
BREP 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR1198I-3

MODEL

W6HB2C12

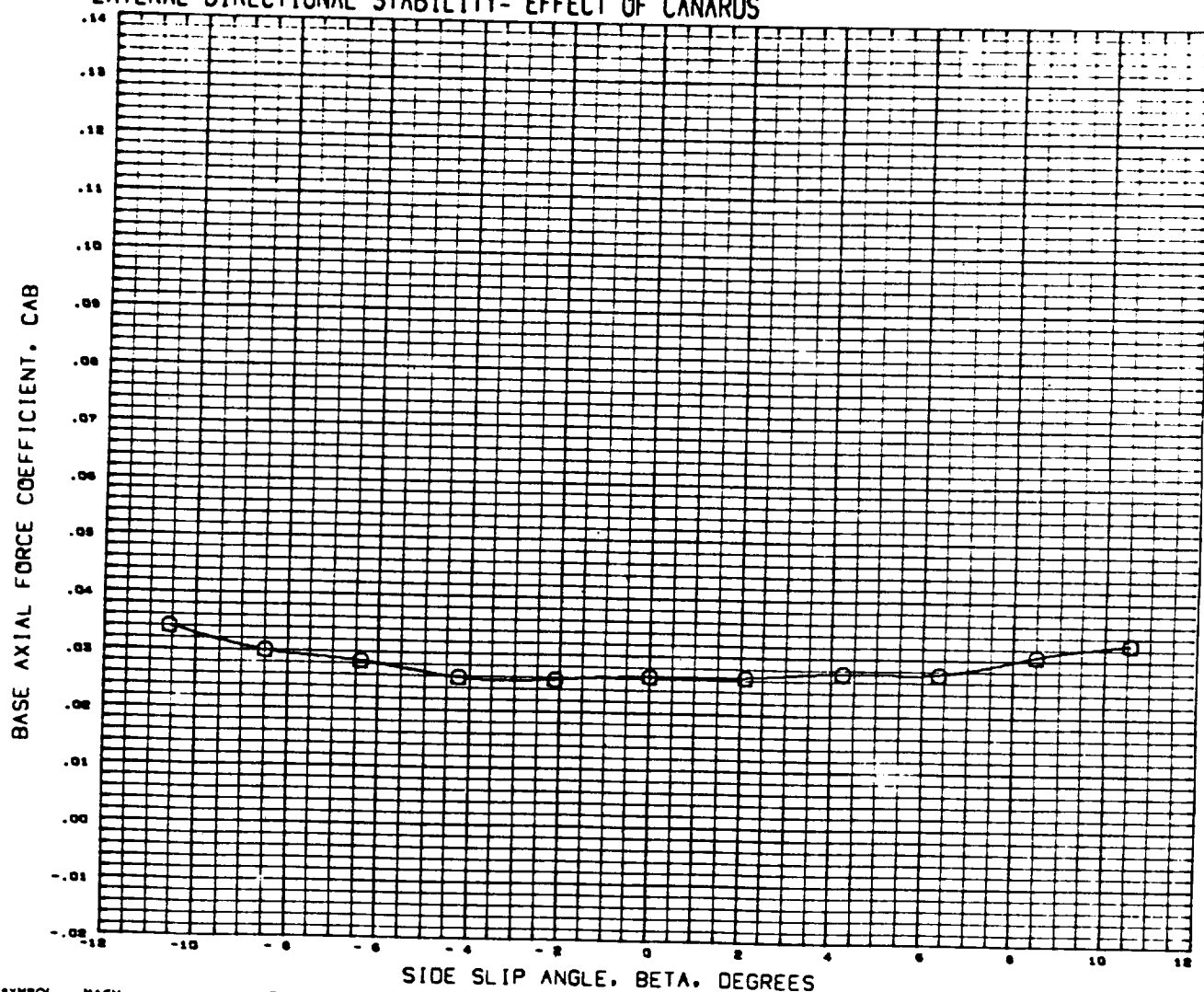
(E3834H)

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442

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



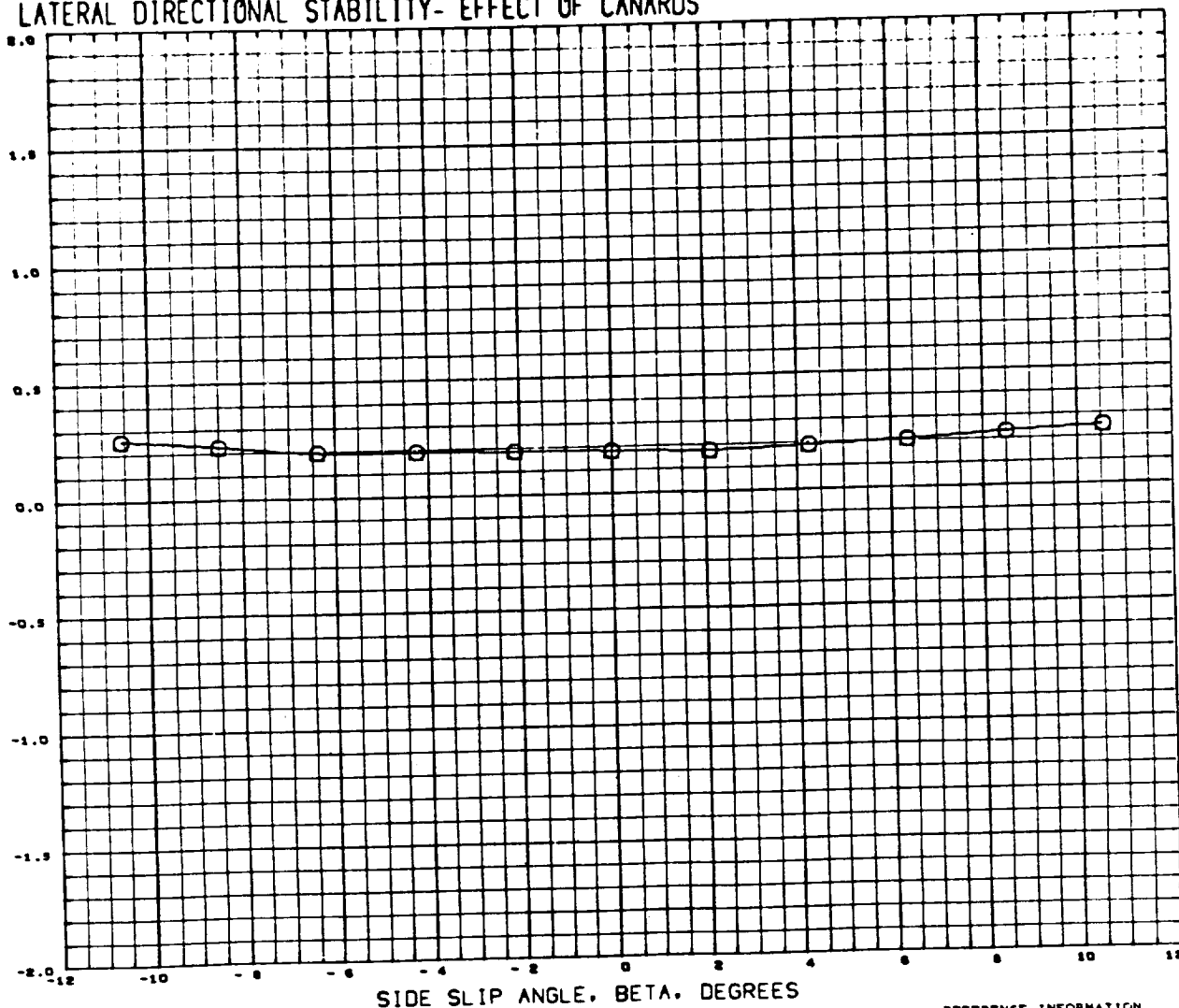
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		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		ATLRON	0.000	CANARD	- 20.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W6H82C12 (E3834H) 06 SEP 72 PAGE 444

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



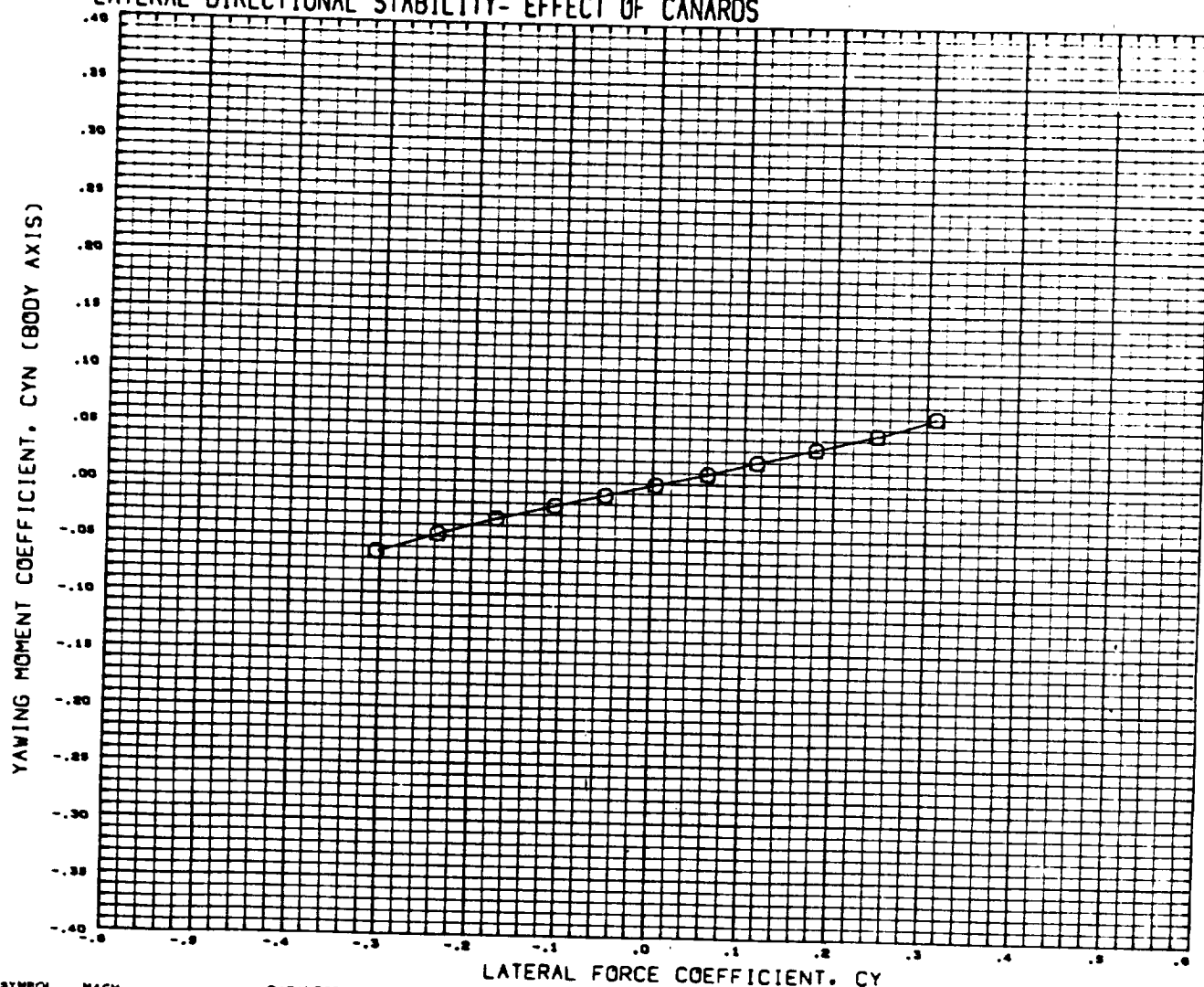
SYMBOL \bigcirc MACH 1.957

PARAMETRIC VALUES			
ALPHA	15.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	-20.000

REFERENCE INFORMATION		
SREF	4.6225	82. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.957

PARAMETRIC VALUES			
ALPHA	19.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	-20.000

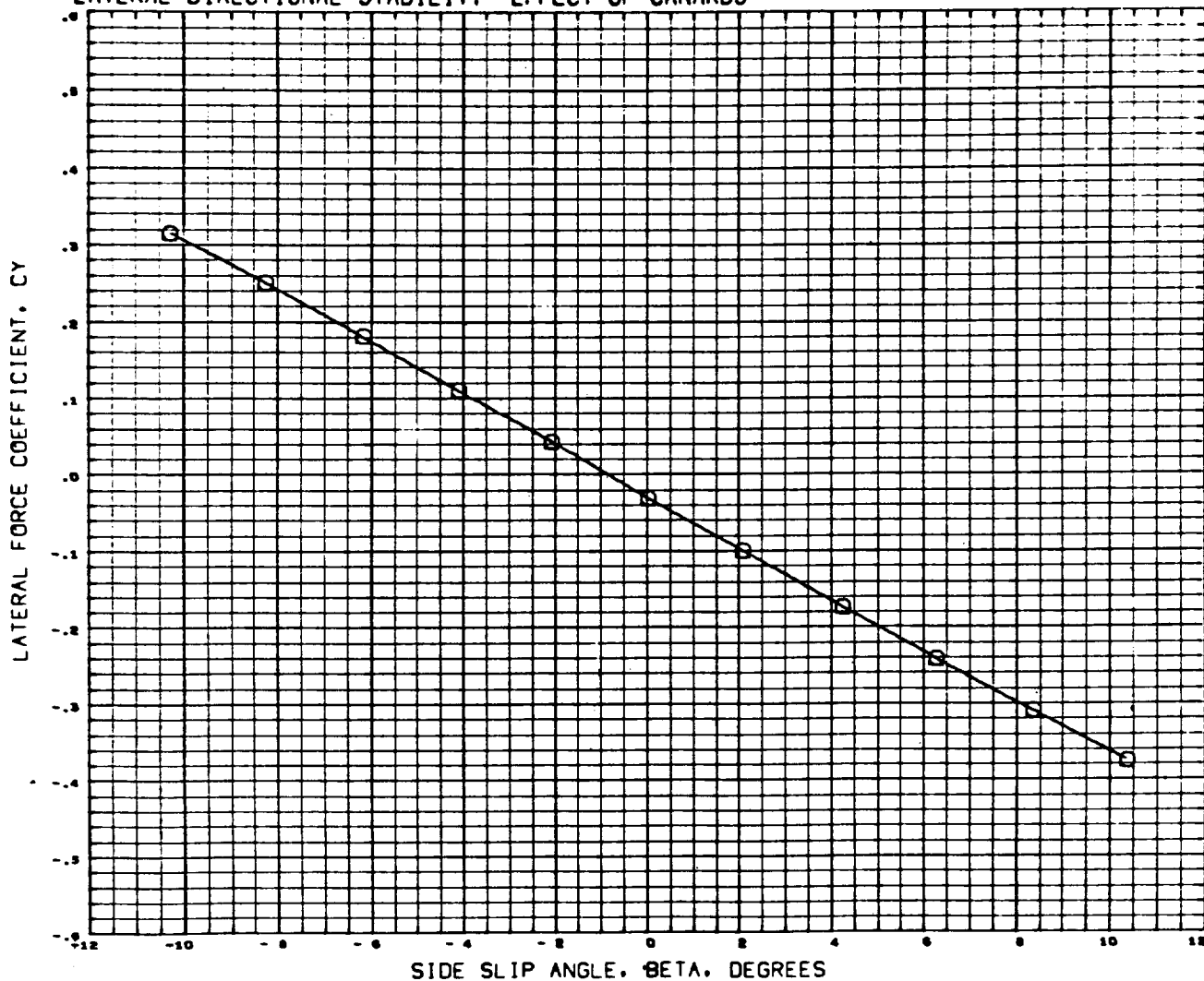
REFERENCE INFORMATION

SREF	4.6225	sq. in.
LREF	1.5360	in.
BREF	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

496-MSFC AR1198I-3 MODEL W6HB2C12 (E3834H) 06 SEP 72 PAGE 446

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

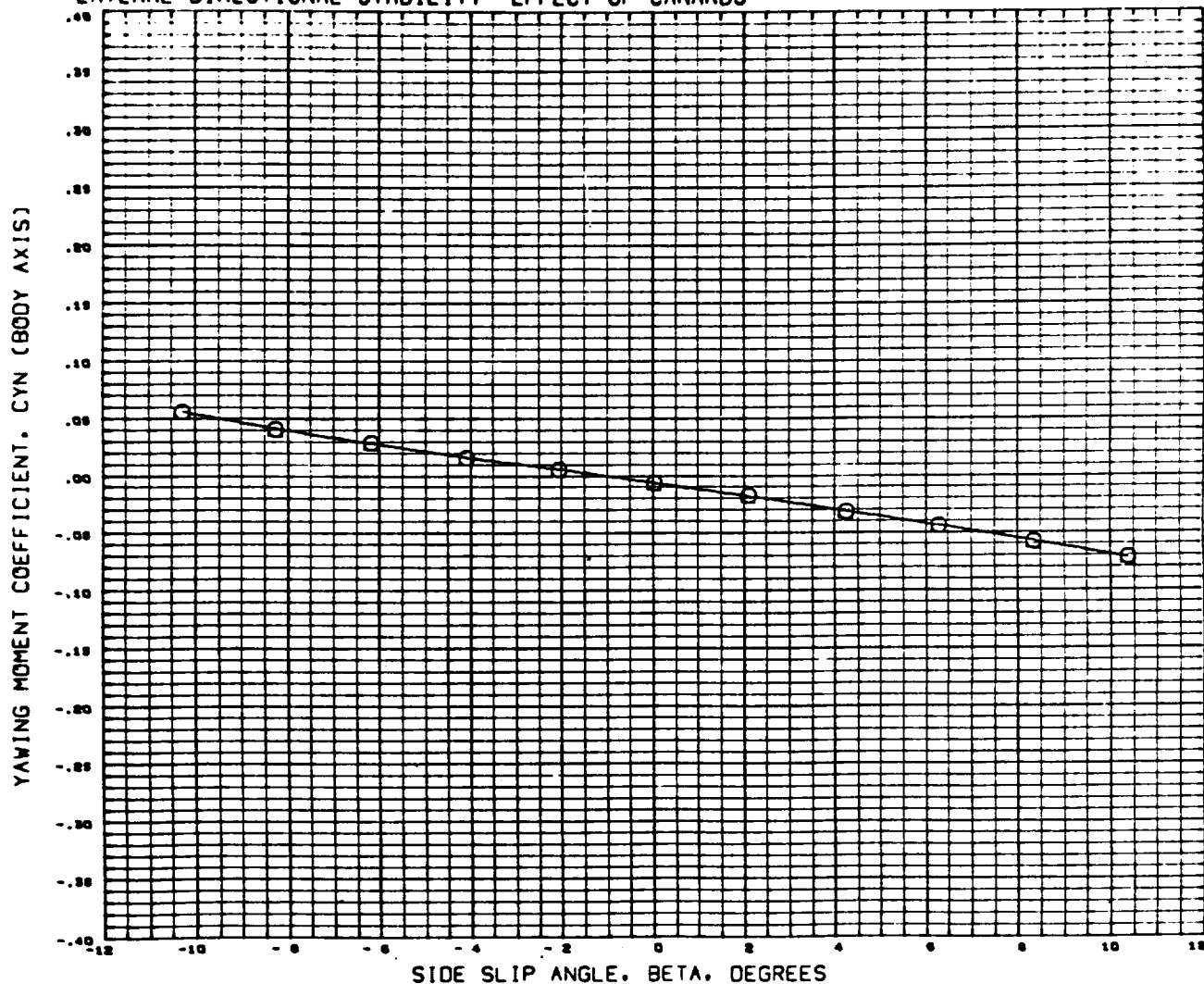


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	3.450	ALPHA	30.000	DEL	0.000	BREF	4.6225	80. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
		ATLRON	0.000	CANARD	- 40.000	BREF	4.3000	IN.
						ZMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12 (E38351) 06 SEP 72 PAGE 447

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

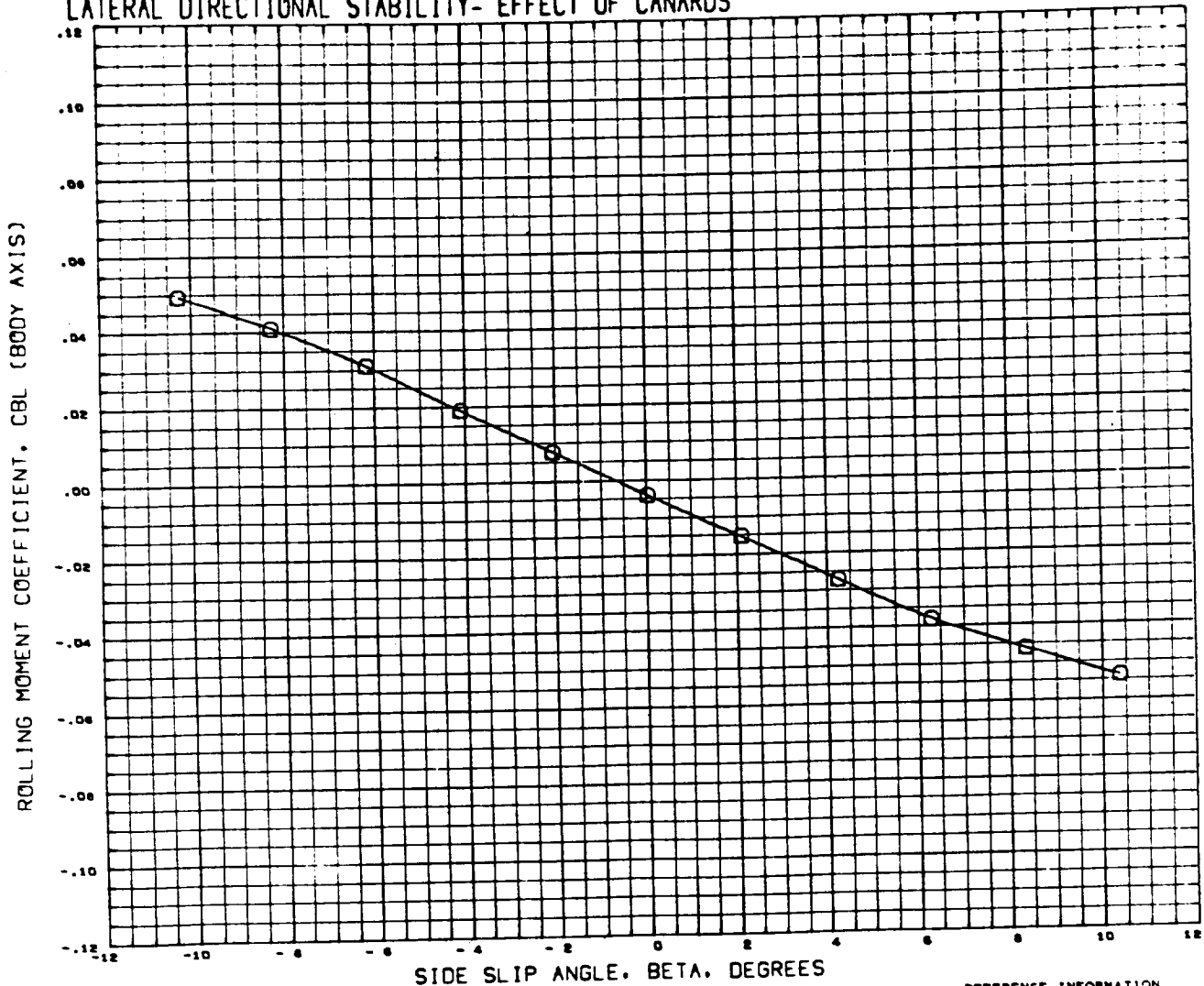


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	3.480	ALPHA	30.000	DEL	0.000	SREF	4.6225	30. IN.
		DER	0.000	ELEVTR	0.000	LRFP	1.3360	IN.
		ATLRON	0.000	CANARD	-40.000	BRFP	4.3000	IN.
						YMRP	2.4000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12 (E38351) 06 SEP 72 PAGE 448

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

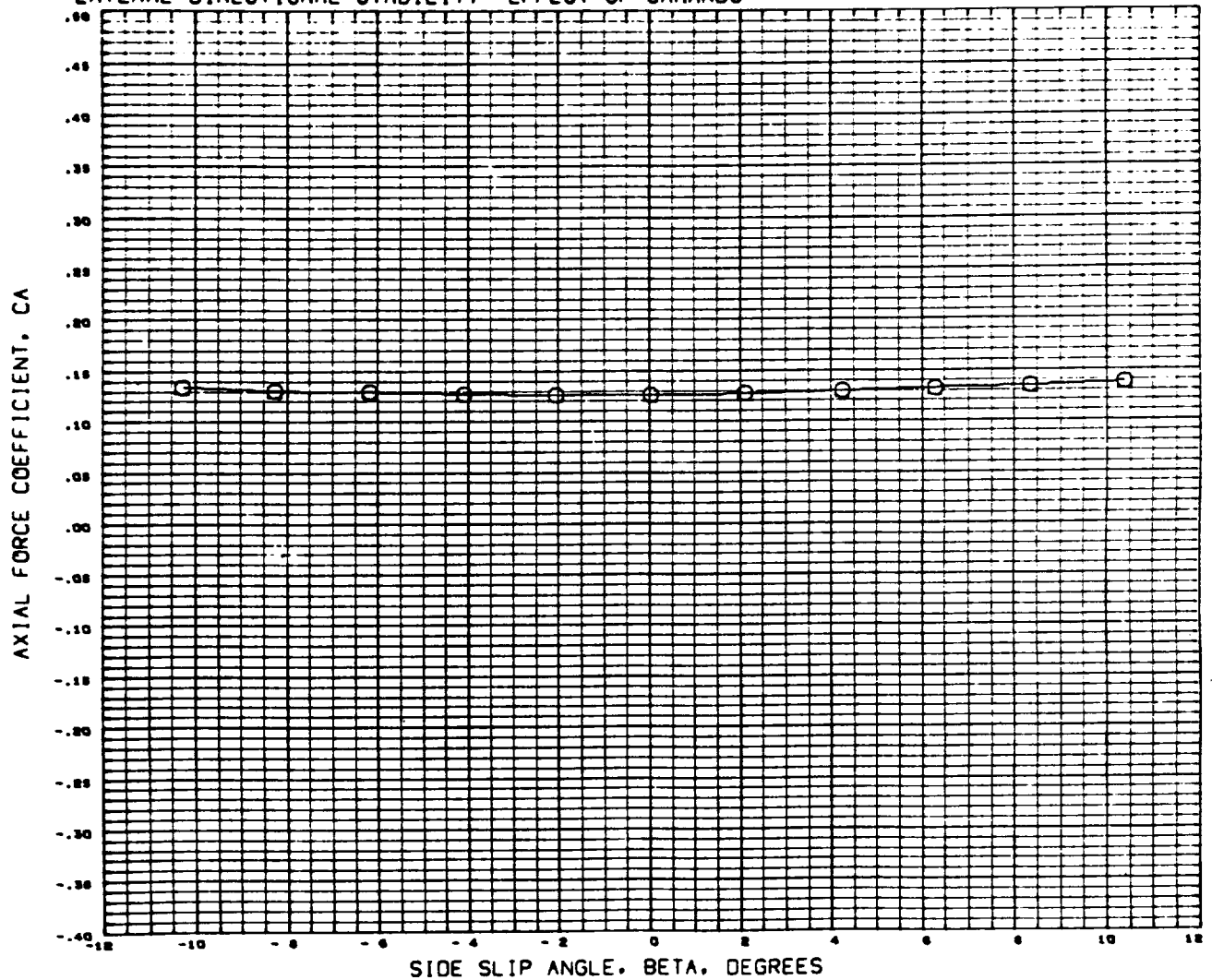


SYMBOL ○	MACH 3.480	PARAMETRIC VALUES			
		ALPHA	30.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
SREF	4.6223	SQ. IN.
LREF	1.3340	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0023	

DATA HIST. CODE *E

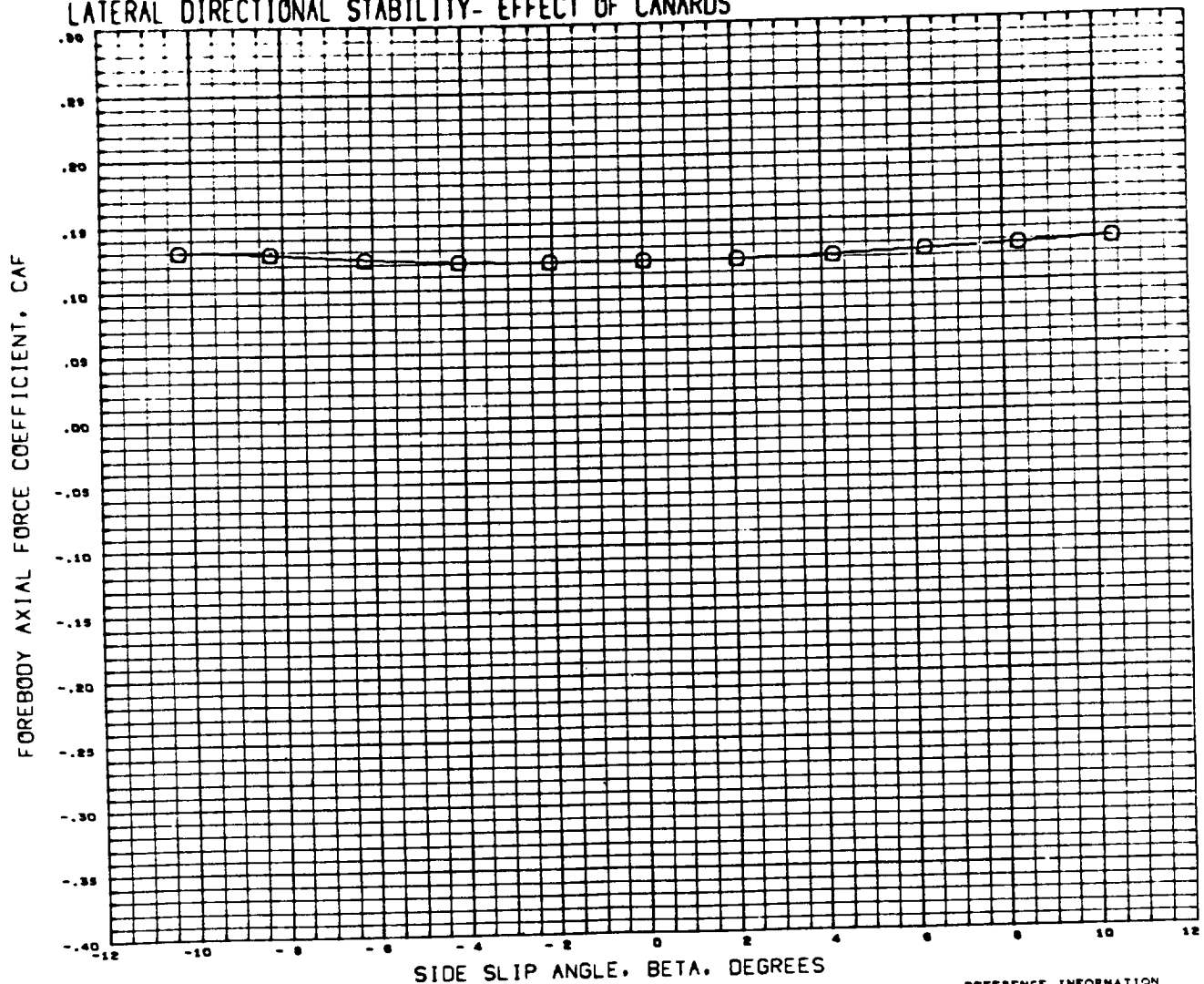
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		3.480		ALPHA	30.000	DEL	0.000	SREF	4.6225	SQ. IN.
				OER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
				AILRON	0.000	CANARD	-40.000	BREF	4.3000	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

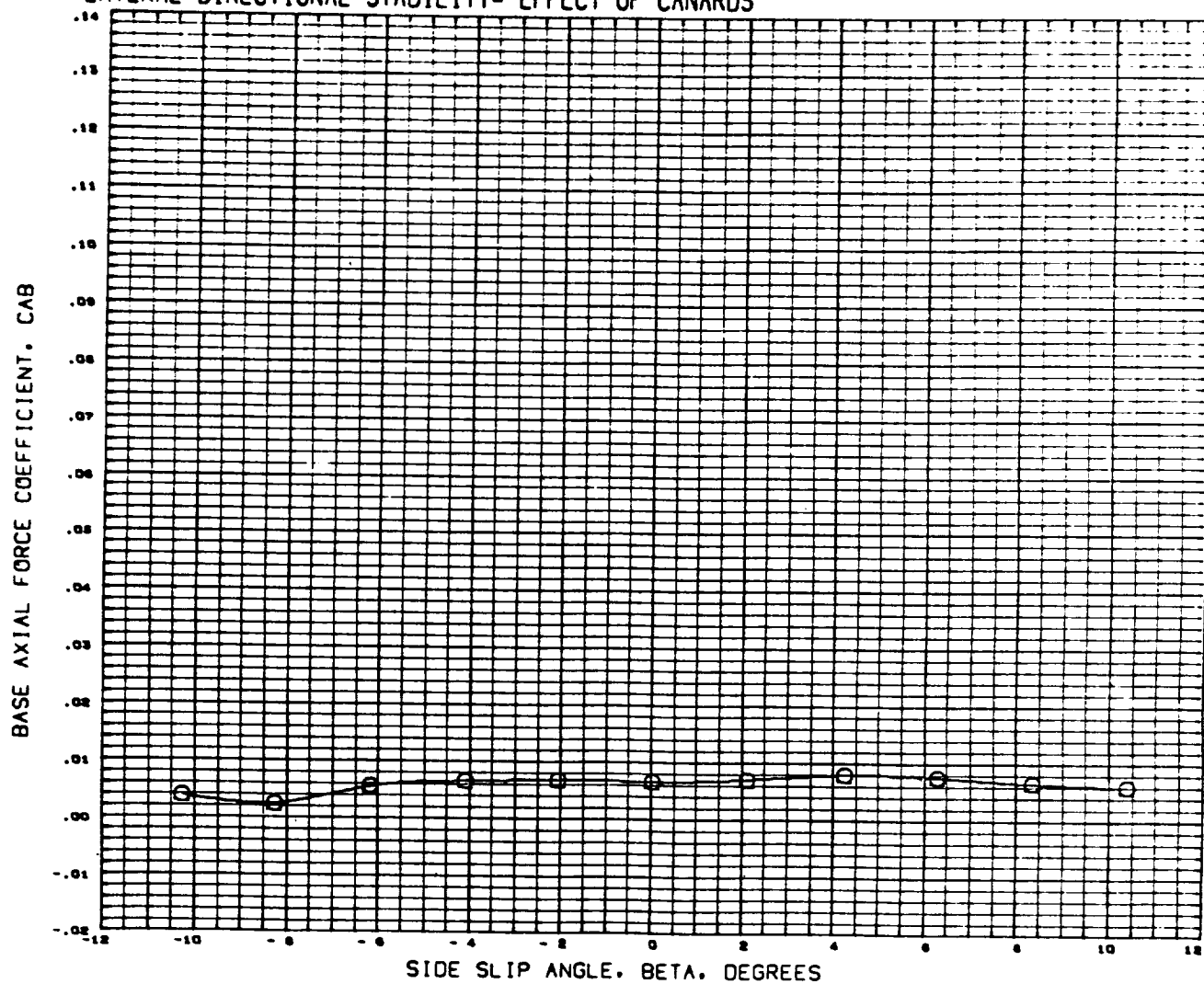


SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		3.480		ALPHA	30.000	DEL	0.000	BREF	4.6225	50. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.9360	IN.
				ATLROH	0.000	CANARD	- 40.000	BREF	4.3000	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



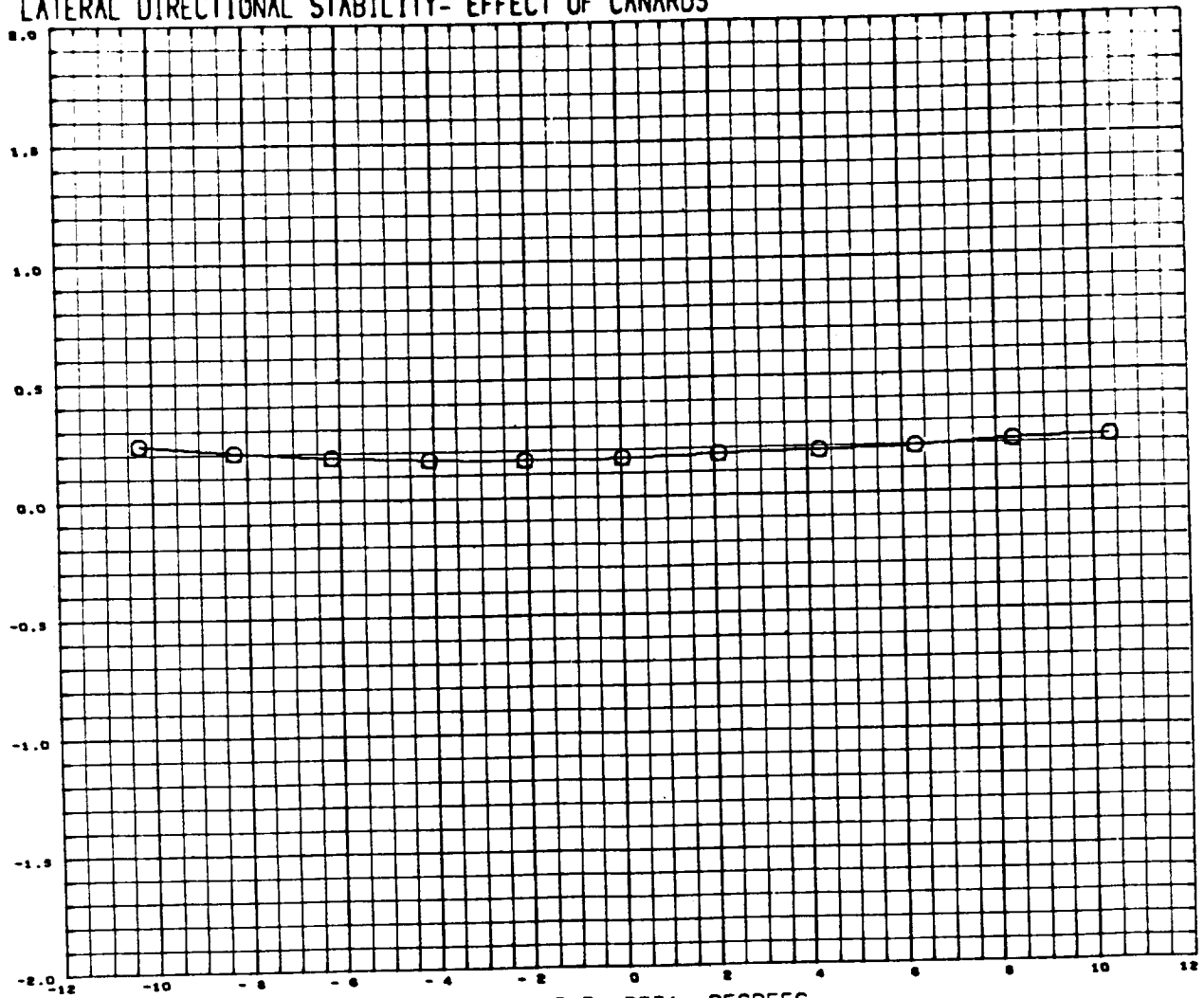
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	3.480	ALPHA	30.000	OEL	0.000	SREF	4.6225	SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.5380	IN.
		AILRON	0.000	CANARD	- 40.000	BREF	4.3000	IN.
						YMRP	2.4000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



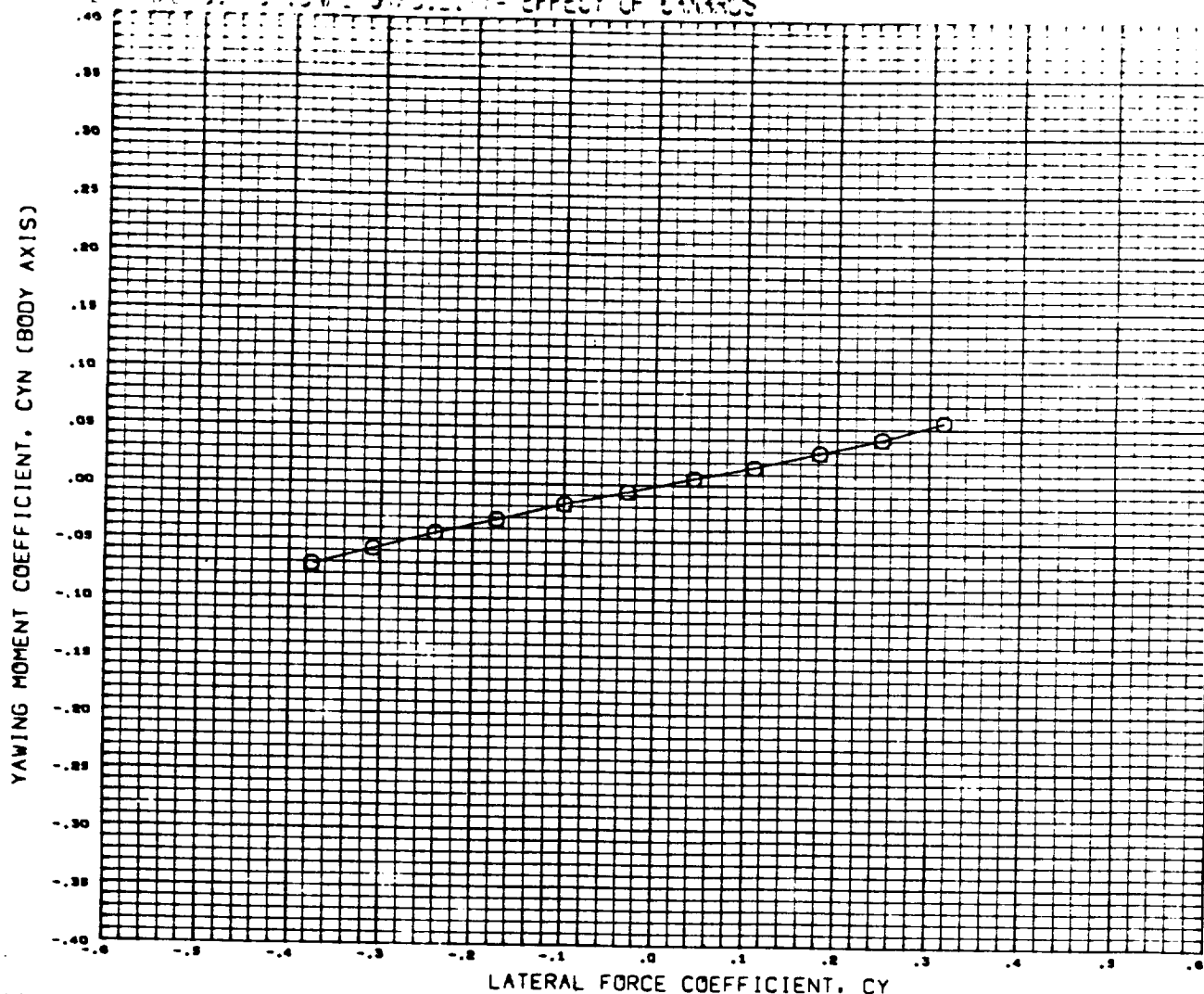
SYMBOL MACH 3.480
 O
 ALPHA 30.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 3.400

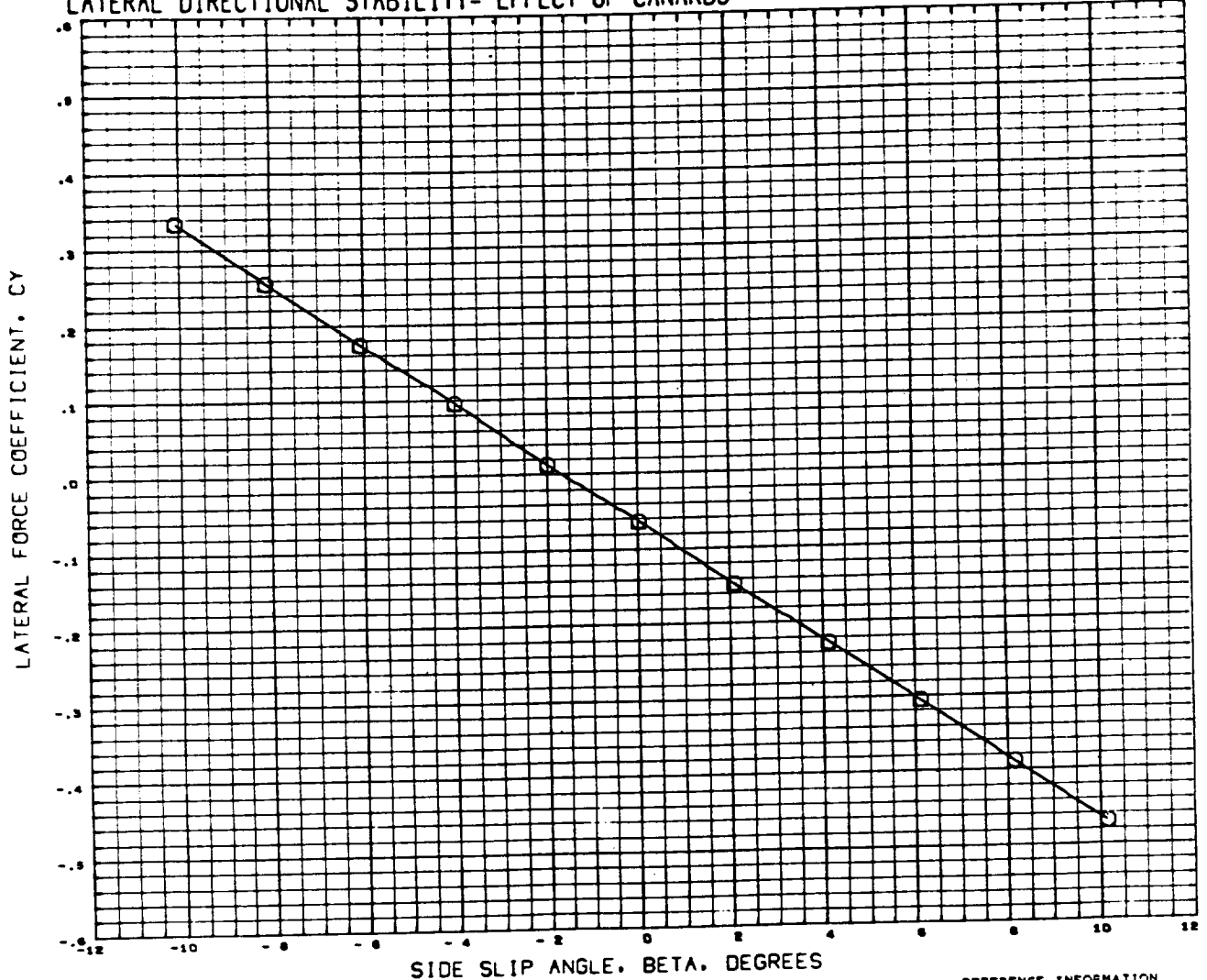
PARAMETRIC VALUES			
ALPHA	30.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	-40.000

REFERENCE INFORMATION

SREP	4.6225	sq. in.
LREP	1.5340	in.
BREP	4.3000	in.
XMRP	2.4000	in.
YMRP	0.0000	in.
ZMRP	0.0000	in.
SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES			
○	4.959	ALPHA	90.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	- 90.000

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

W496-MSFC

AR11981-3

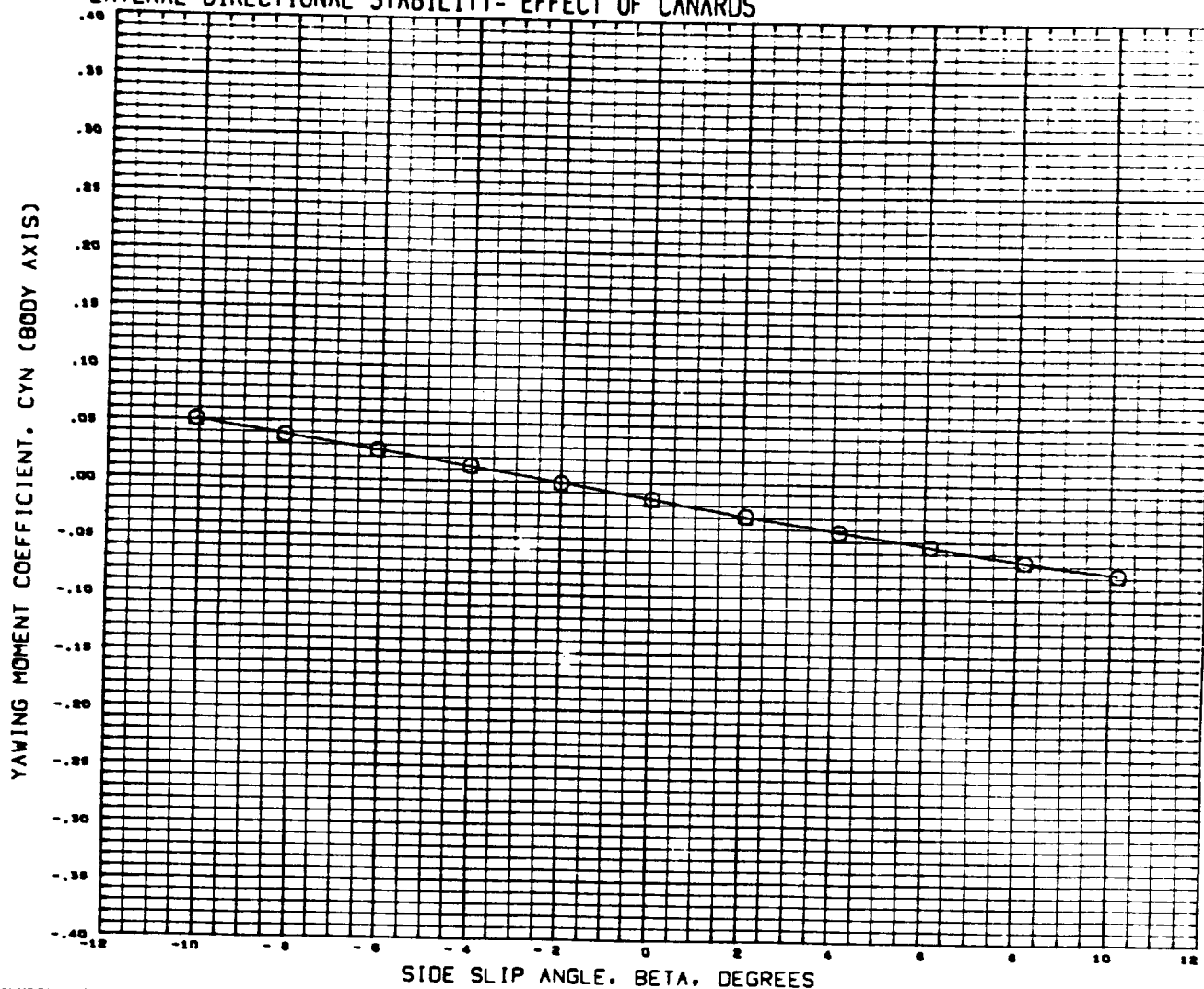
MODEL

W6HB2C12

(E3836J) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

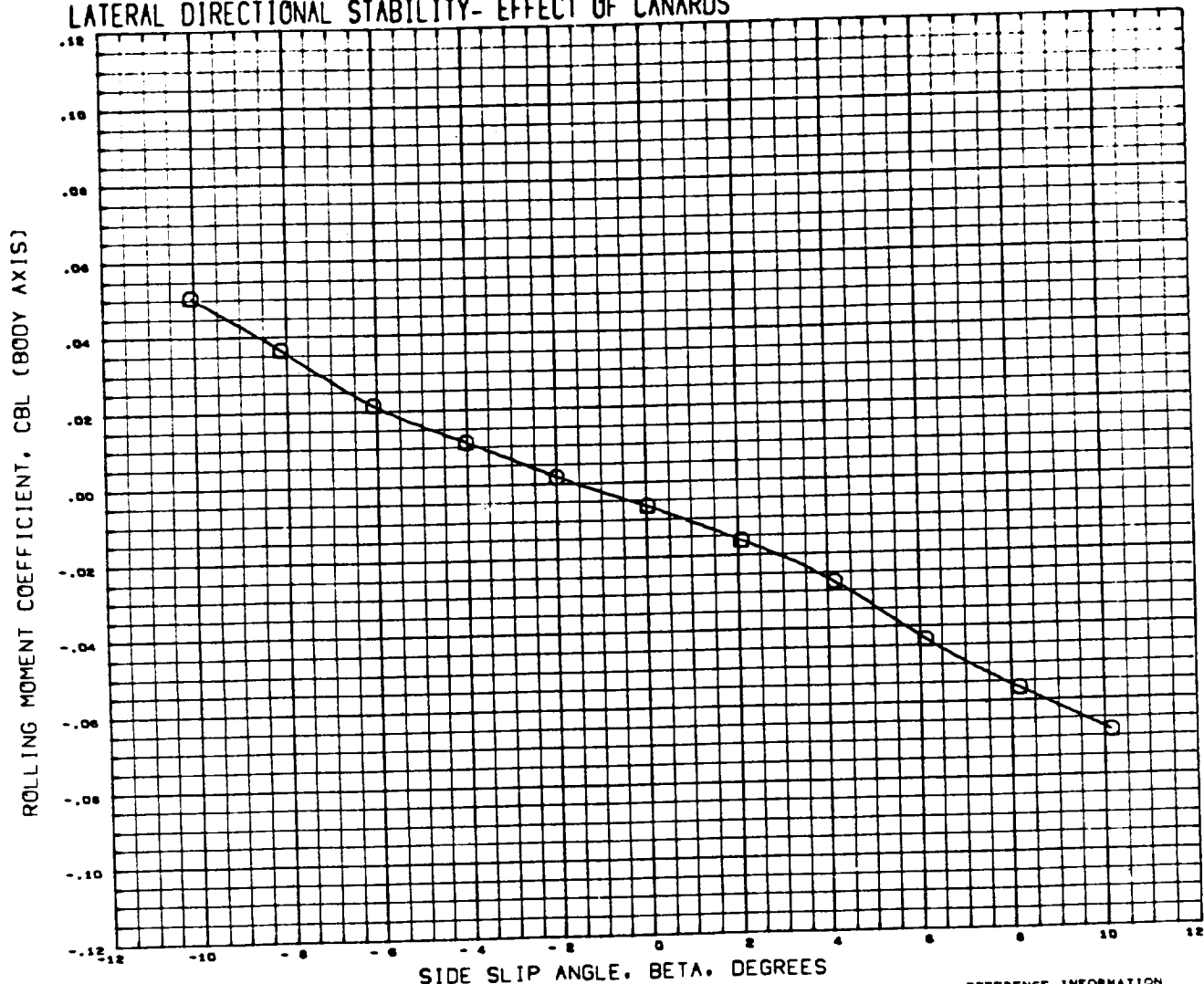


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	4.959	ALPHA	50.000	DEL	0.000	SREF	4.6225	53. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		ATLRON	0.000	CANARD	60.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

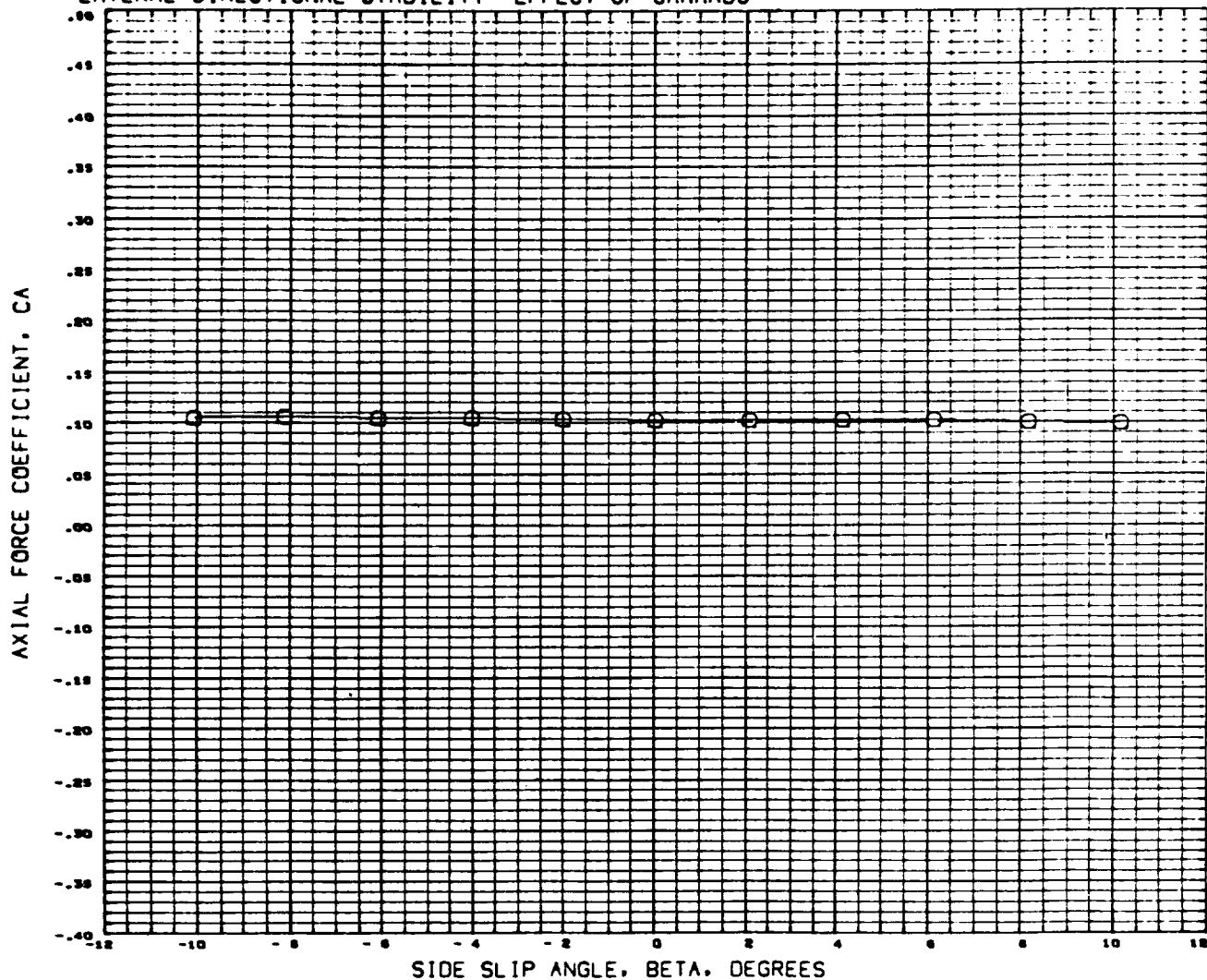
M496-MSFC AR1198I-3 MODEL W6HB2C12 (E3836J) 06 SEP 72 PAGE 456

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



PARAMETRIC VALUES				REFERENCE INFORMATION	
SYMBOL	MACH	ALPHA	DEL	SRF	IN.
○	4.959	90.000	0.000	LRP	1.5360
		DER	ELEVTR	SRP	4.3000
		AILRON	CANARD	ZHRP	2.4000
				ZHRP	0.0000
				ZHRP	0.0000
				SCALE	0.0025

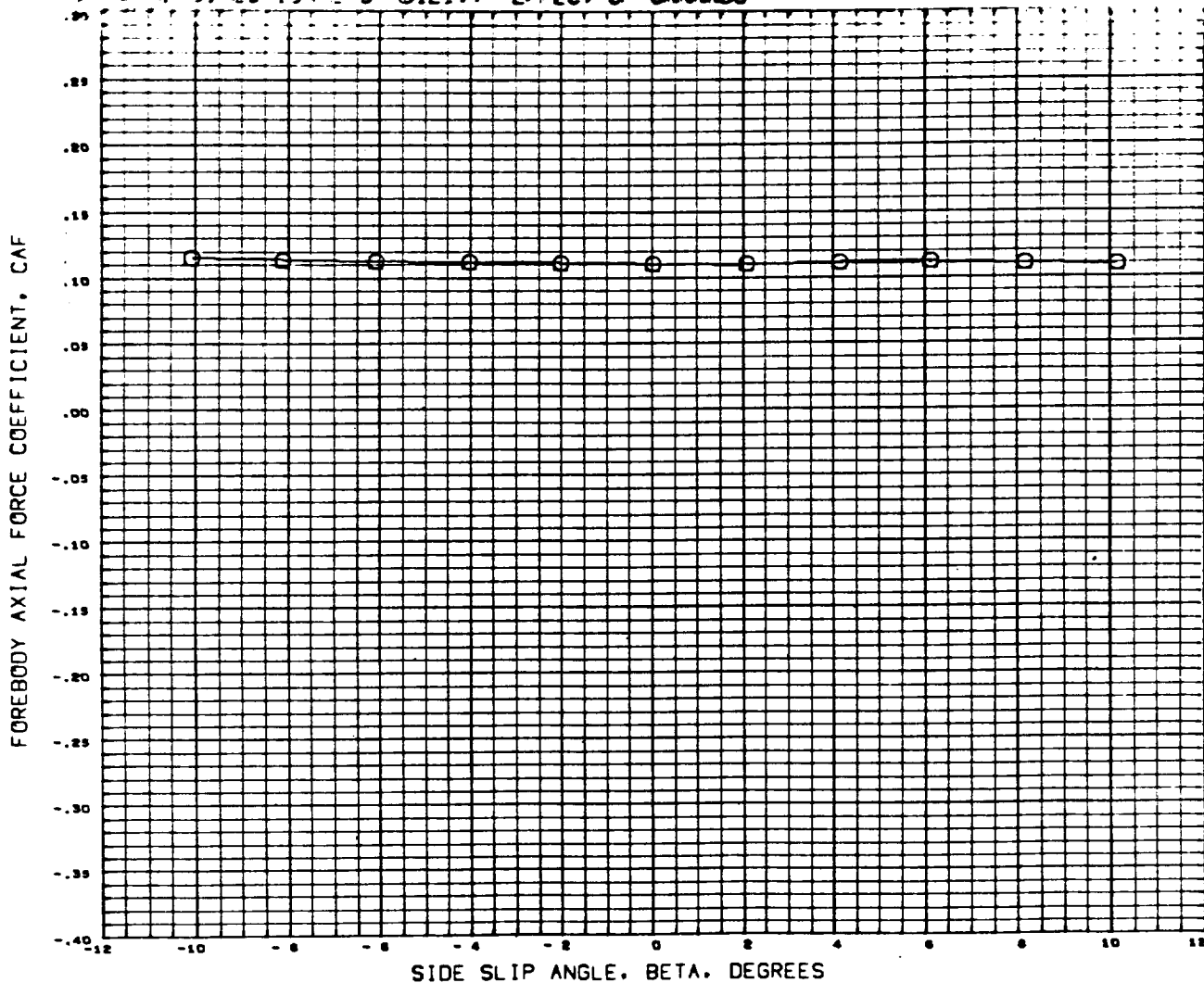
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		4.959		ALPHA	90.000	DEL	0.000	SREF	4.6225	93. IN.
				DER	0.000	ELEVTR	0.000	LREF	1.3360	IN.
				AIRLON	0.000	CANARD	- 60.000	BRFP	4.3000	IN.
								ZMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

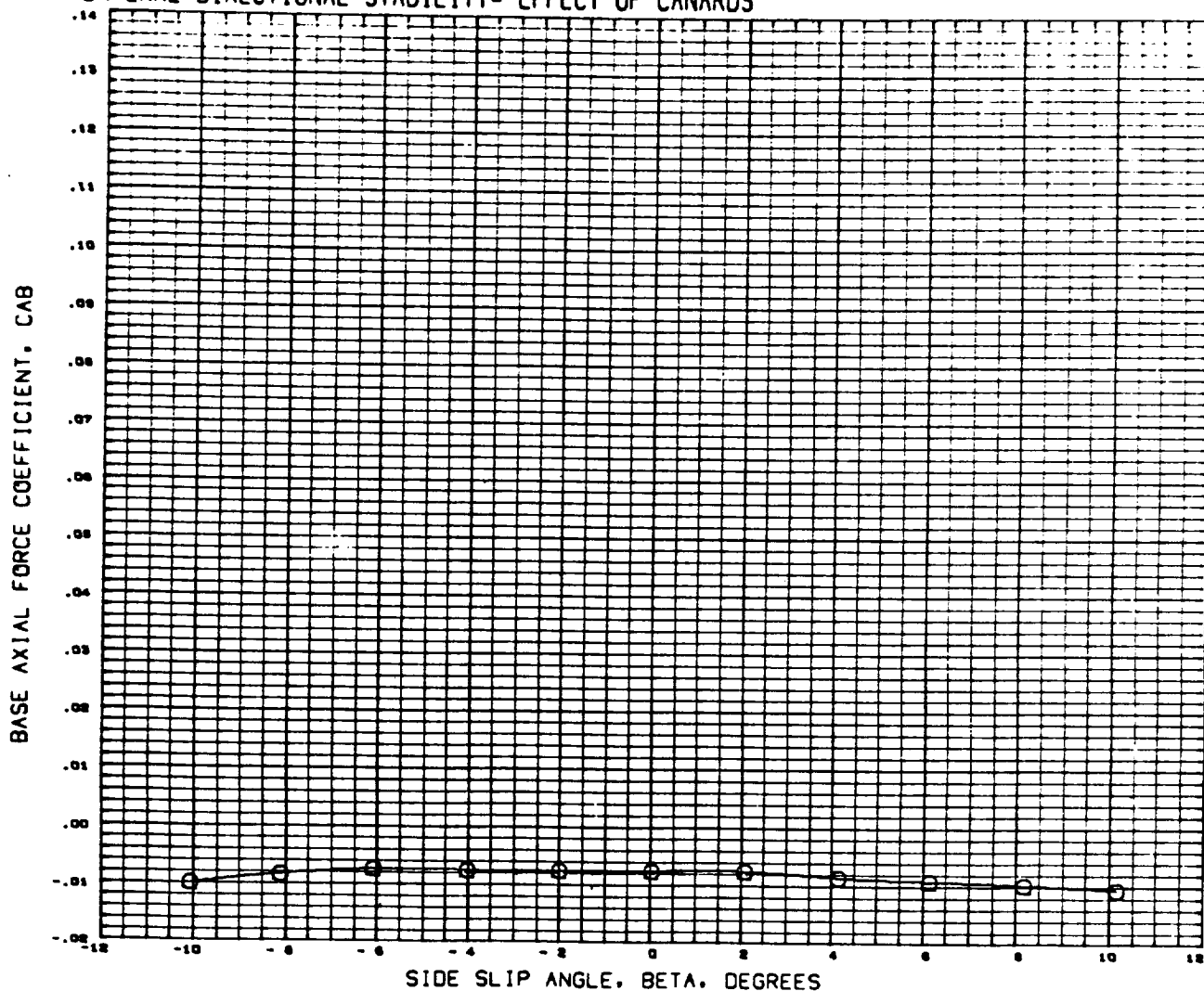
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
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				DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
				ATLRON	0.000	CANARD	- 80.000	BREF	4.3000	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



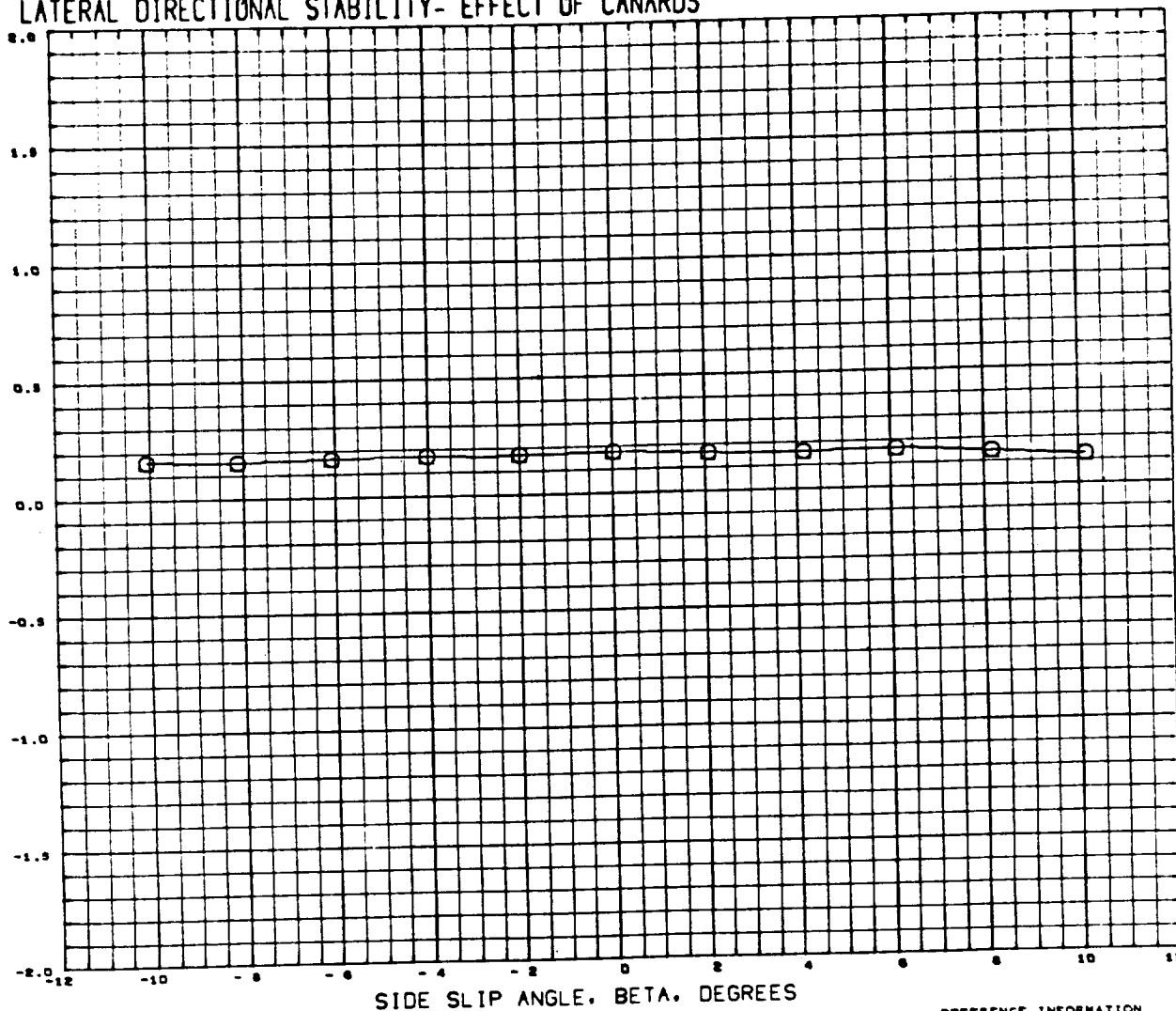
SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
		AILRON	0.000	CANARD	- 60.000	BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



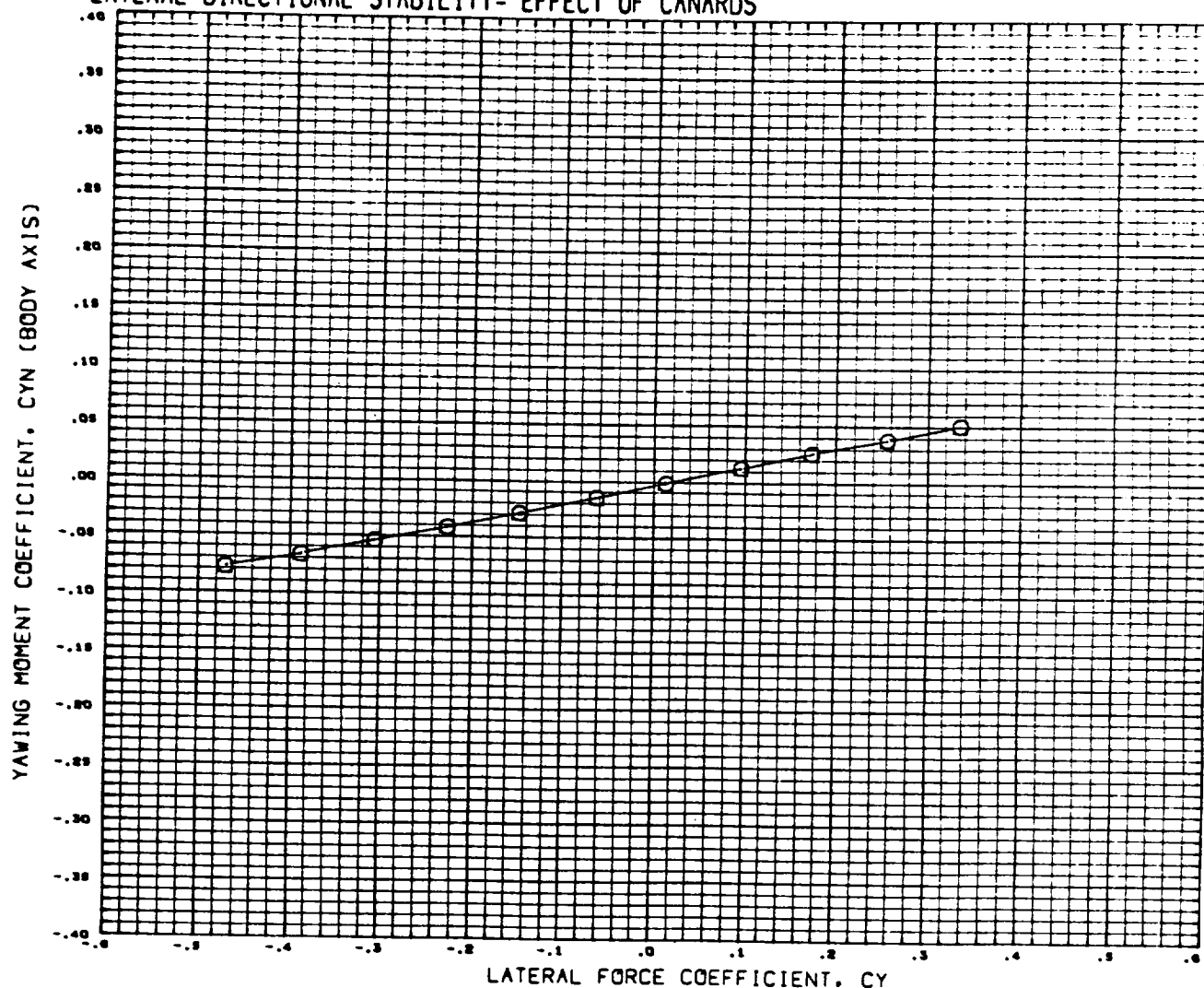
SYMBOL MACH
 O 4.959
 ALPHA 90.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 80.000

REFERENCE INFORMATION
 SREF 4.6225 50. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 YHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6HB2C12 (E3836J) 06 SEP 72 PAGE 461

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

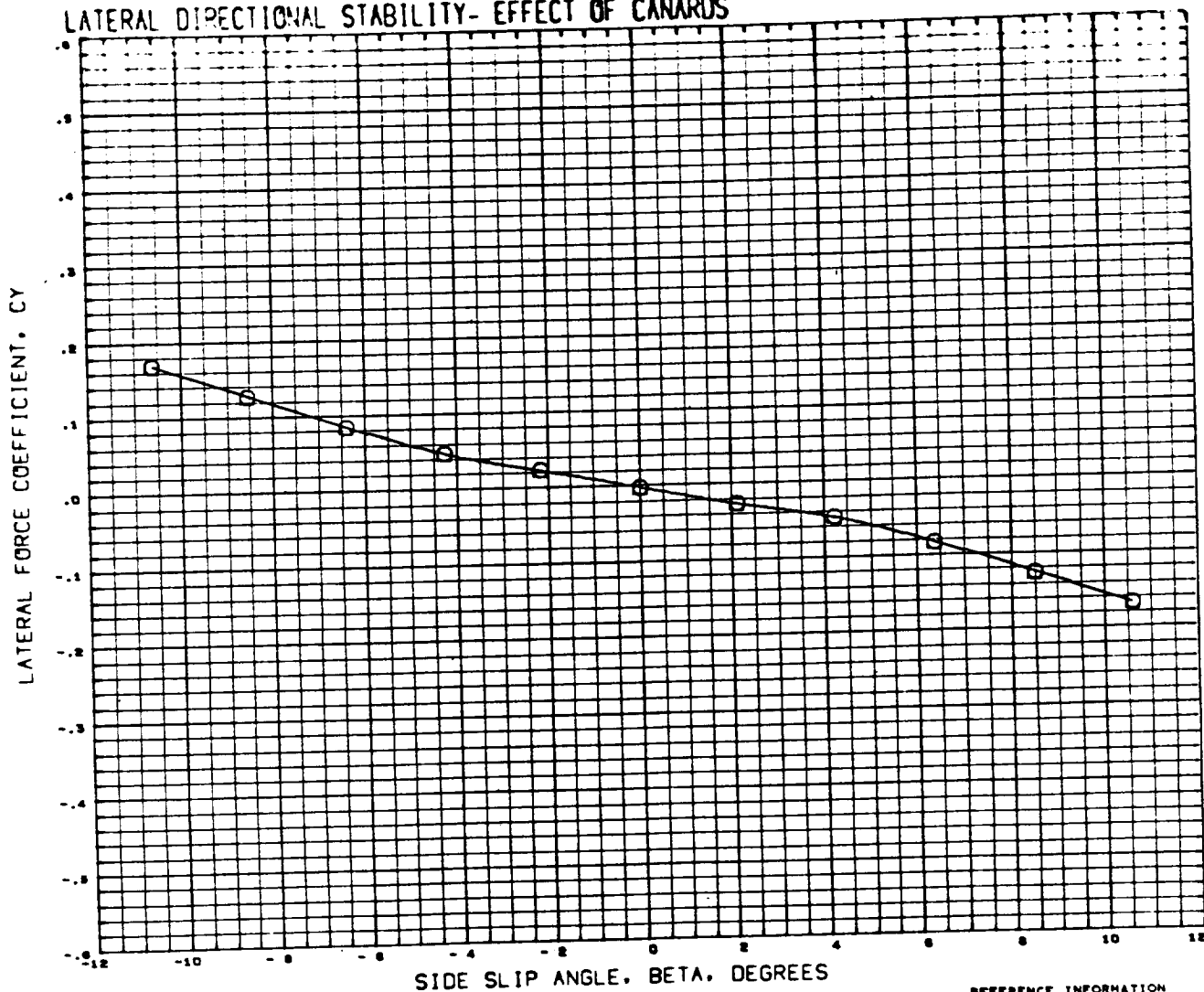


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	4.929	ALPHA	50.000	DEL	0.000	SREF	4.6225	sq. in.
		DER	0.000	ELEVTR	0.000	LREF	1.5360	in.
		AILRON	0.000	CANARD	- 80.000	BREF	4.3000	in.
						XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0029	

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W6HB2C12 (E3836J) 06 SEP 72 PAGE 462

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.957
 ALPHA 15.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 7.7005 30. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

W982C12V1

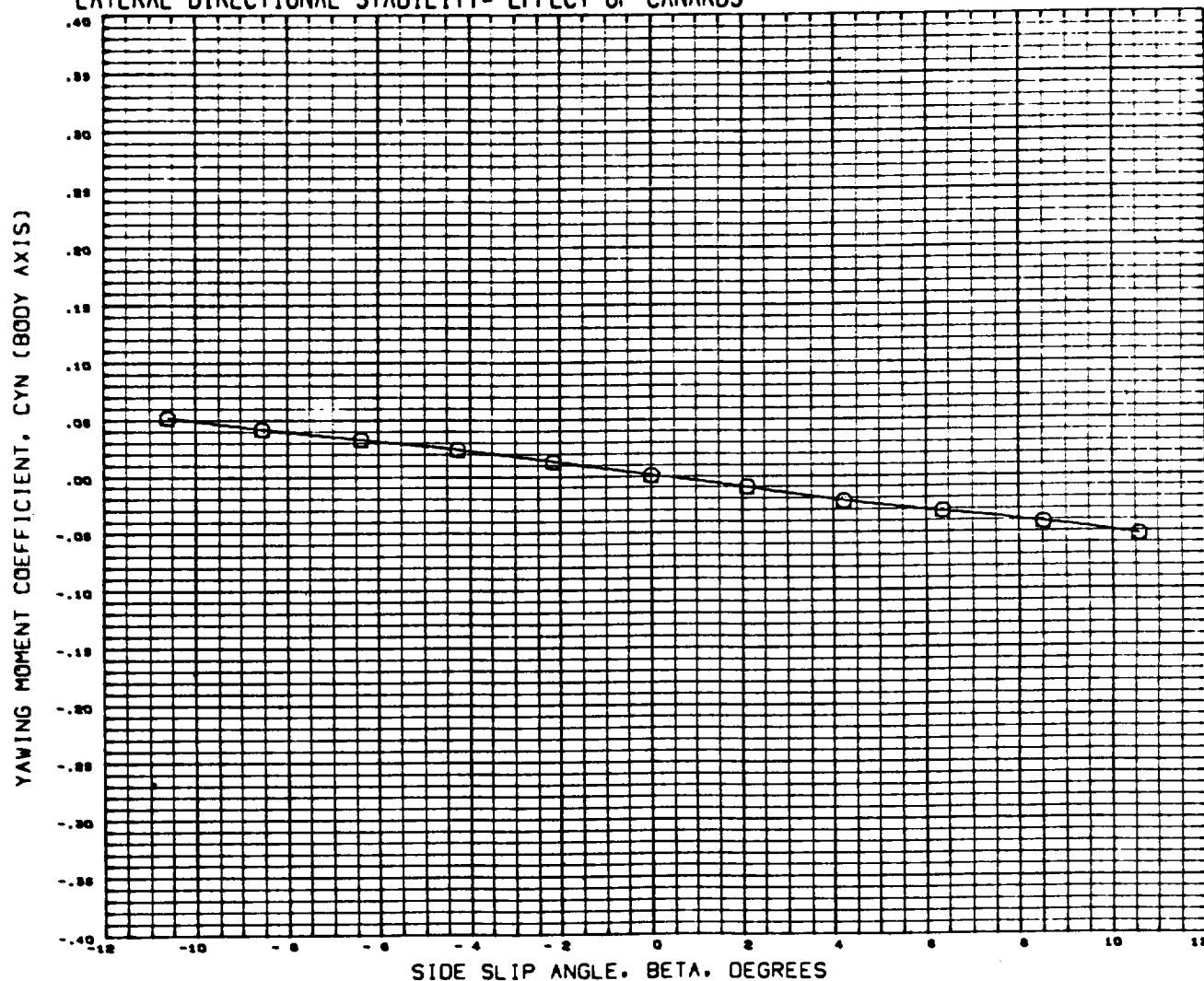
(E3825H)

06 SEP 72

PAGE

463

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



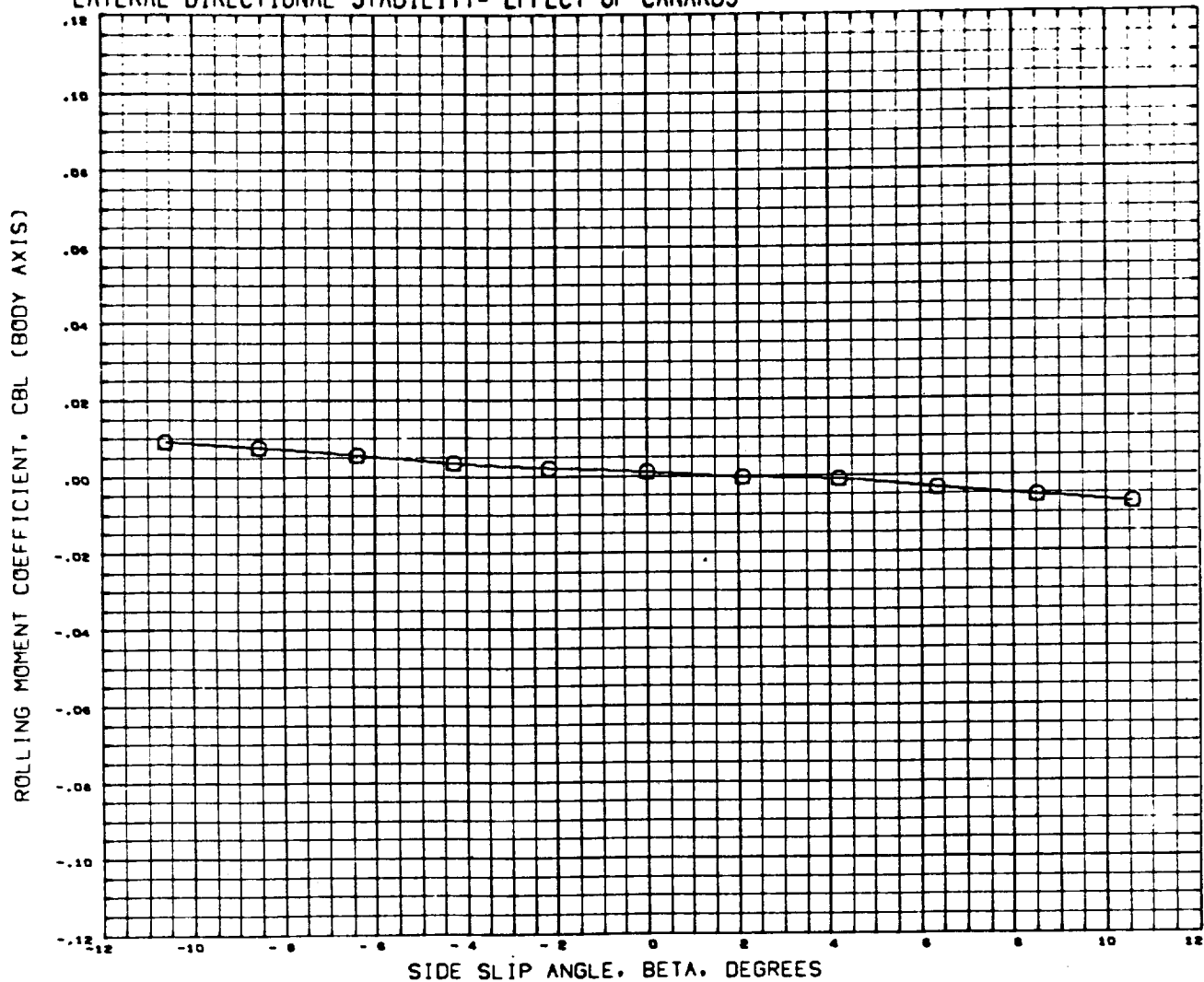
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.957	ALPHA	15.000	OEL	0.000
		OER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	-20.000

REFERENCE INFORMATION		
SREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982C12V1 (E3825H) 06 SEP 72 PAGE 464

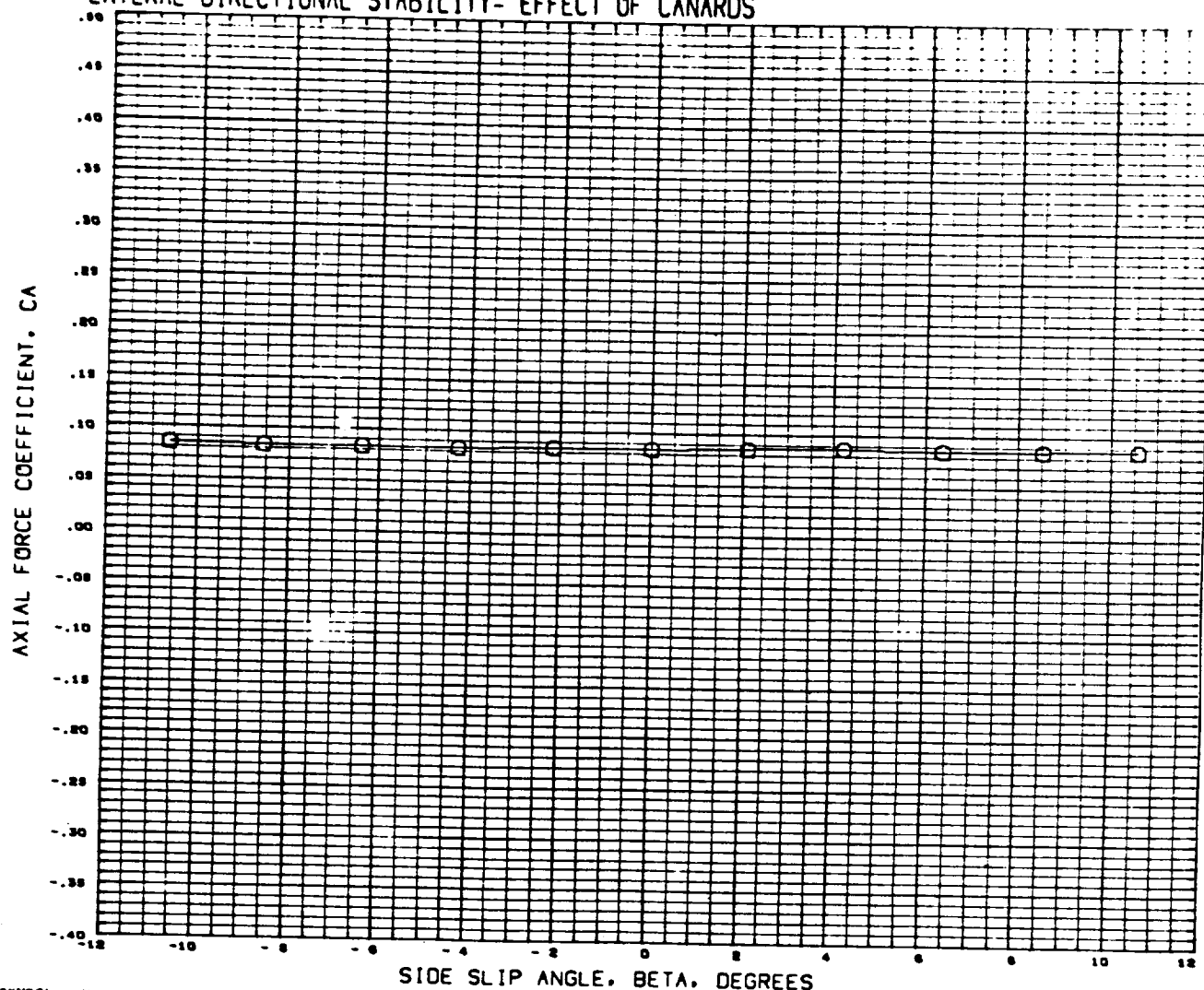
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.937		ALPHA	15.000	DEL	0.000	SREF	7.7005	SQ. IN.
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				AILRON	0.000	CANARD	-20.000	QREF	4.5920	IN.
								YNRP	2.4000	IN.
								YNRP	0.0000	IN.
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DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

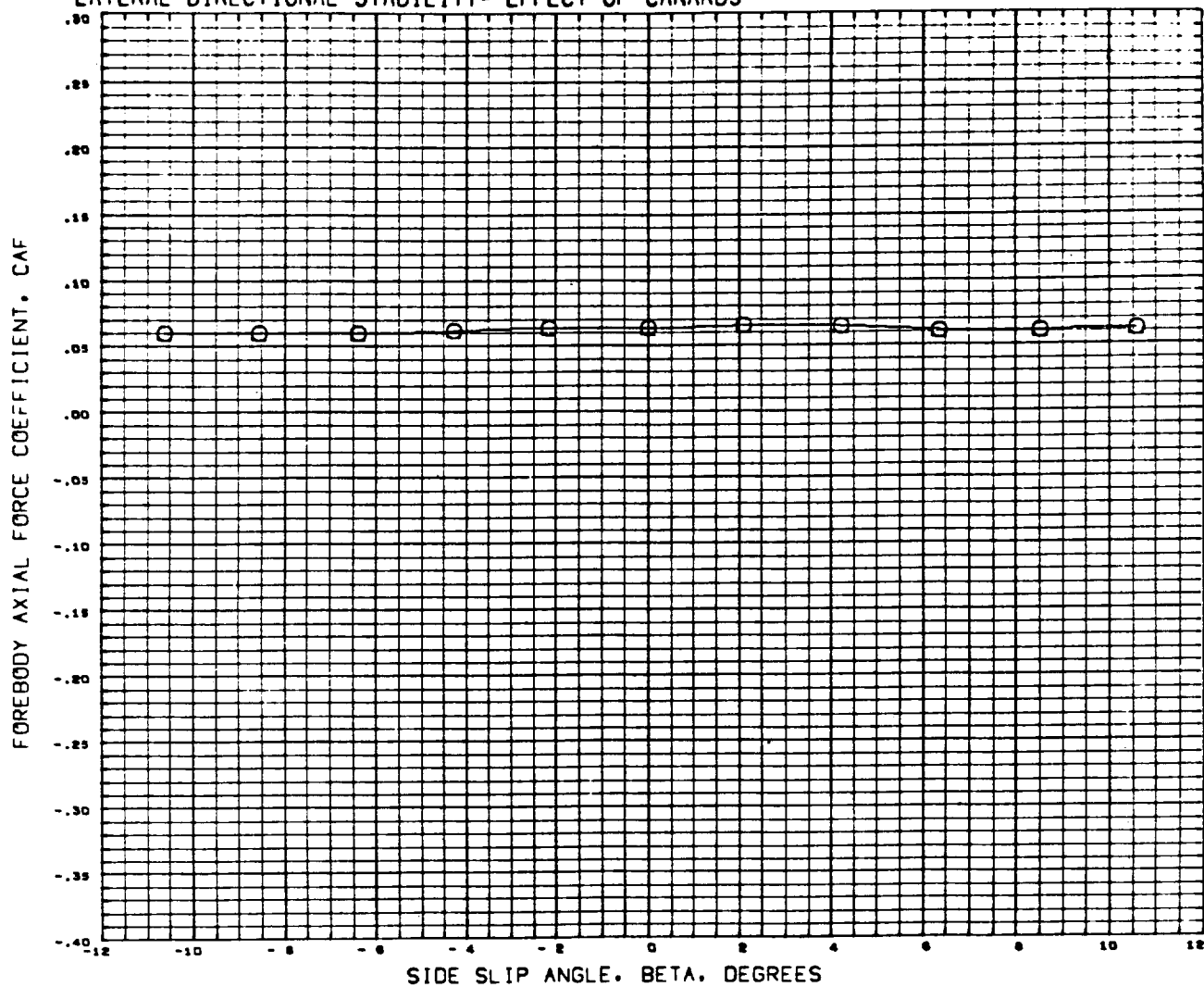


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.957	ALPHA	19.000	DEL	0.000	SREF	7.7005	30. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		AILRON	0.000	CANARD	- 20.000	BREF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

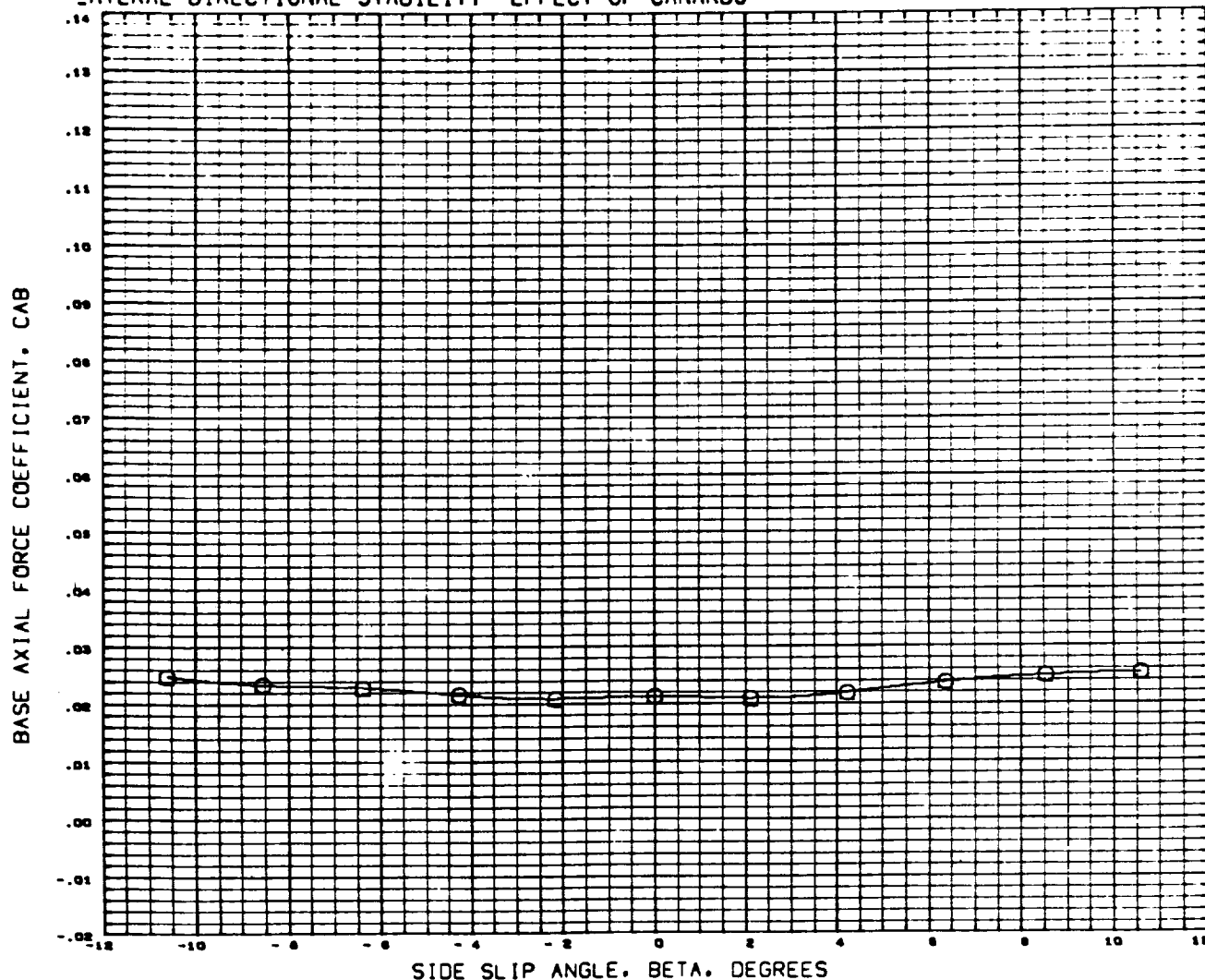
M496-MSFC AR1198I-3 MODEL W9B2C12V1 (E3825H) 06 SEP 72 PAGE 466

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



PARAMETRIC VALUES		REFERENCE INFORMATION	
SYMBOL	MACH	BREF	7.7005
Q	1.957	LREF	3.1700
		BREF	4.3920
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		YMRP	0.0000
		ZMRP	0.0000
		SCALE	0.0025
DATA HIST. CODE			
*E			

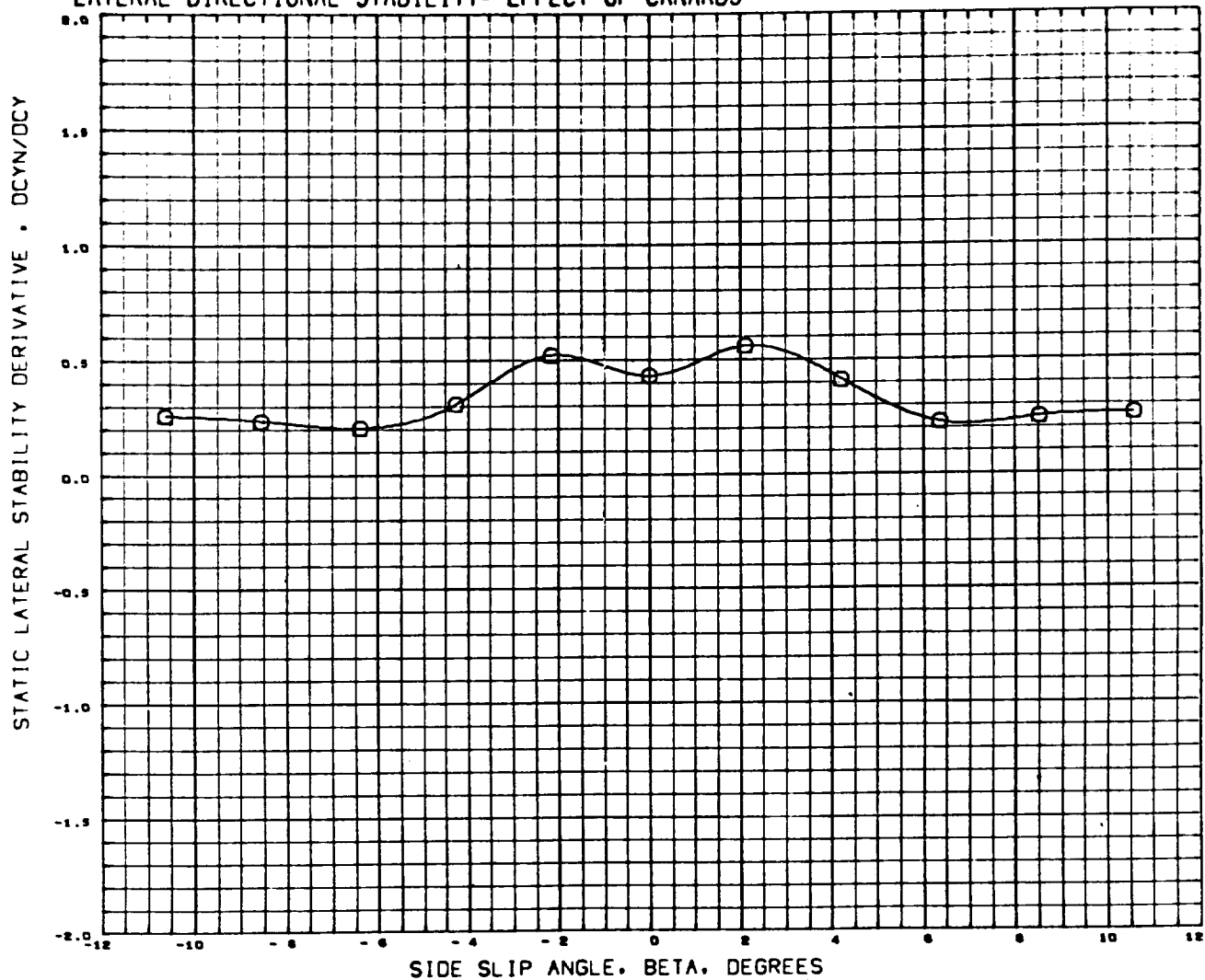
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.957		ALPHA	15.000	DEL	0.000	SREF	7.7005	30. IN.
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				ATLROM	0.000	CANARD	- 20.000	BREF	4.3920	IN.
								XMRP	2.4000	IN.
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DATA HIST. CODE *E

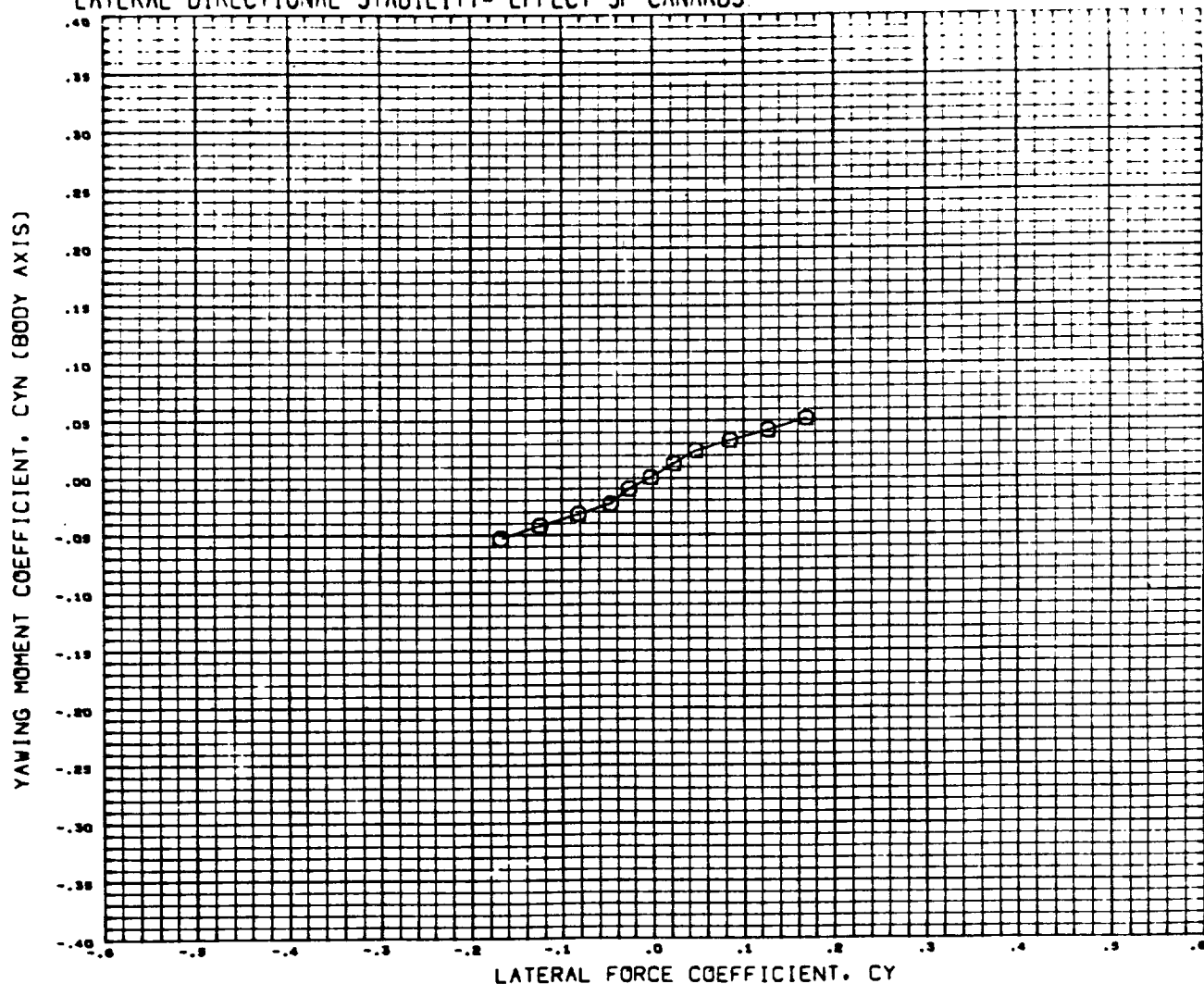
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
O		1.957		ALPHA	15.000	DEL	0.000	BREF	7.7005	80. IN.
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				AILRON	0.000	CANARD	- 20.000	BREF	4.3920	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
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								SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

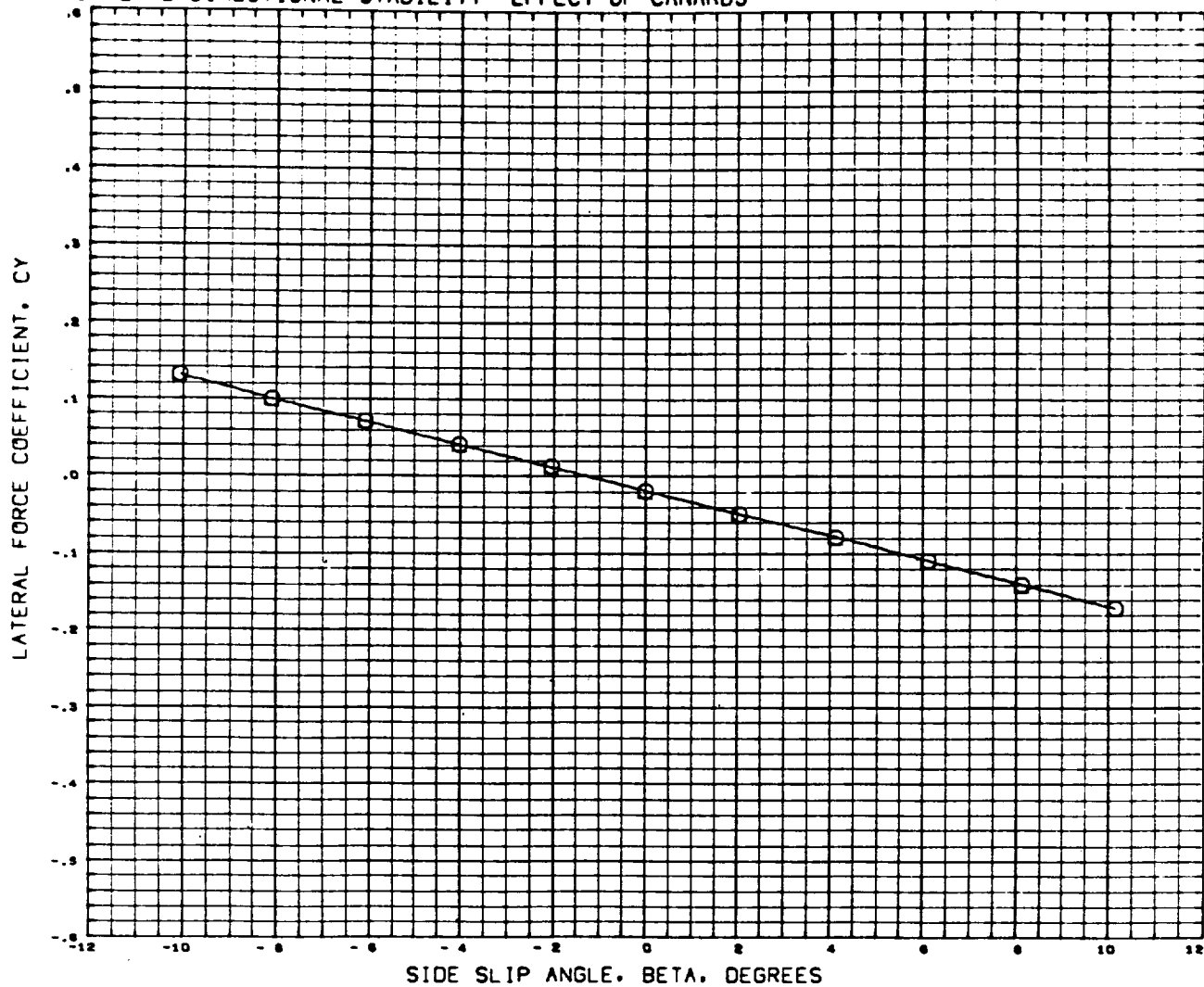


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		ALPHA	DEL	ELEVTR	CANARD	SREF	IN.
○	1.957	15.000	0.000	0.000	-20.000	LREF	3.1700
		DER	0.000	0.000		BREF	4.3920
		AILRON	0.000			XMRP	2.4000
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W982C12V1 (E3825H) 06 SEP 72 PAGE 470

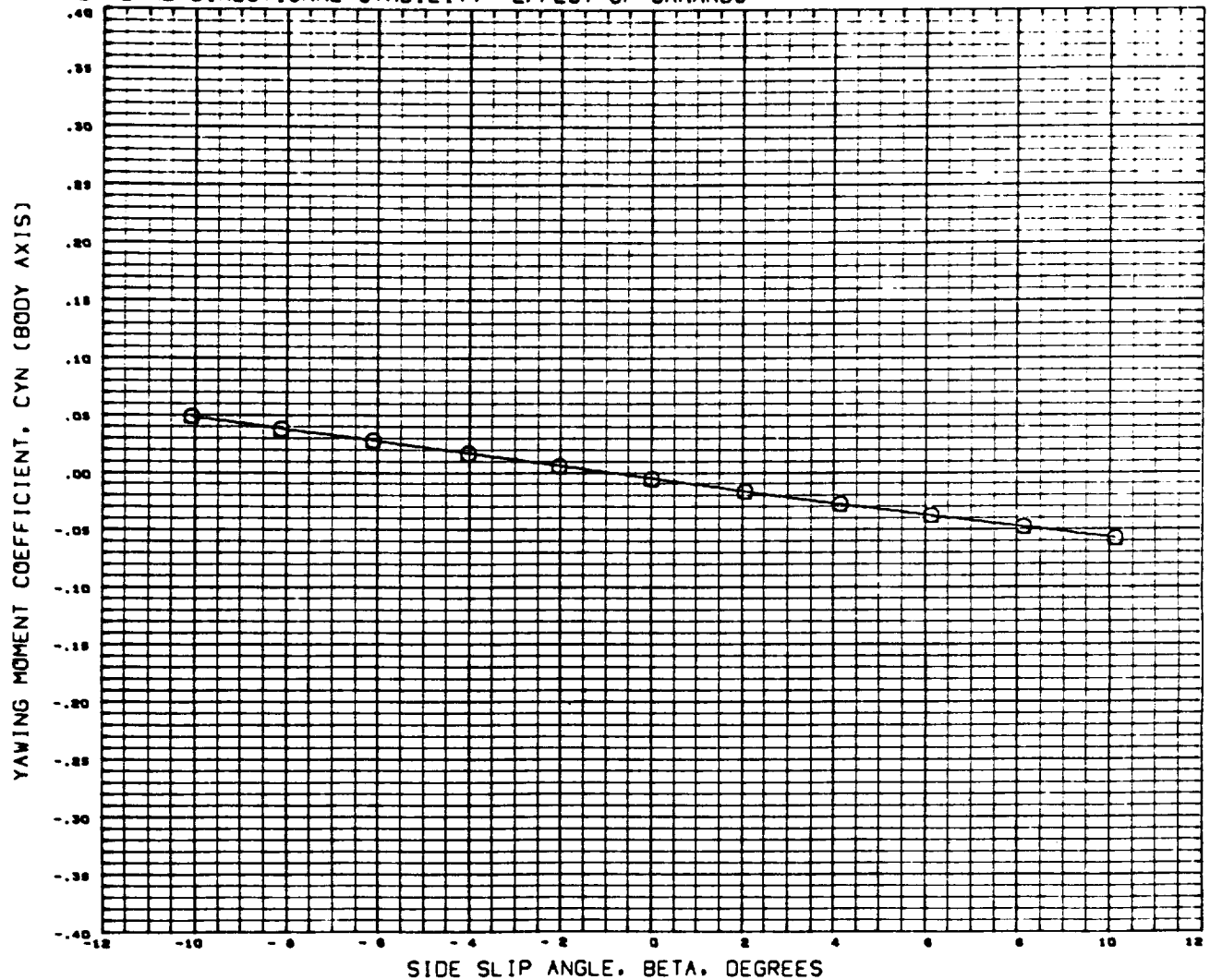
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	4.959	ALPHA	30.000	DEL	0.000	SREF	7.7005 SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
		AILRON	0.000	CANARD	-40.000	BREF	4.3920 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE *E

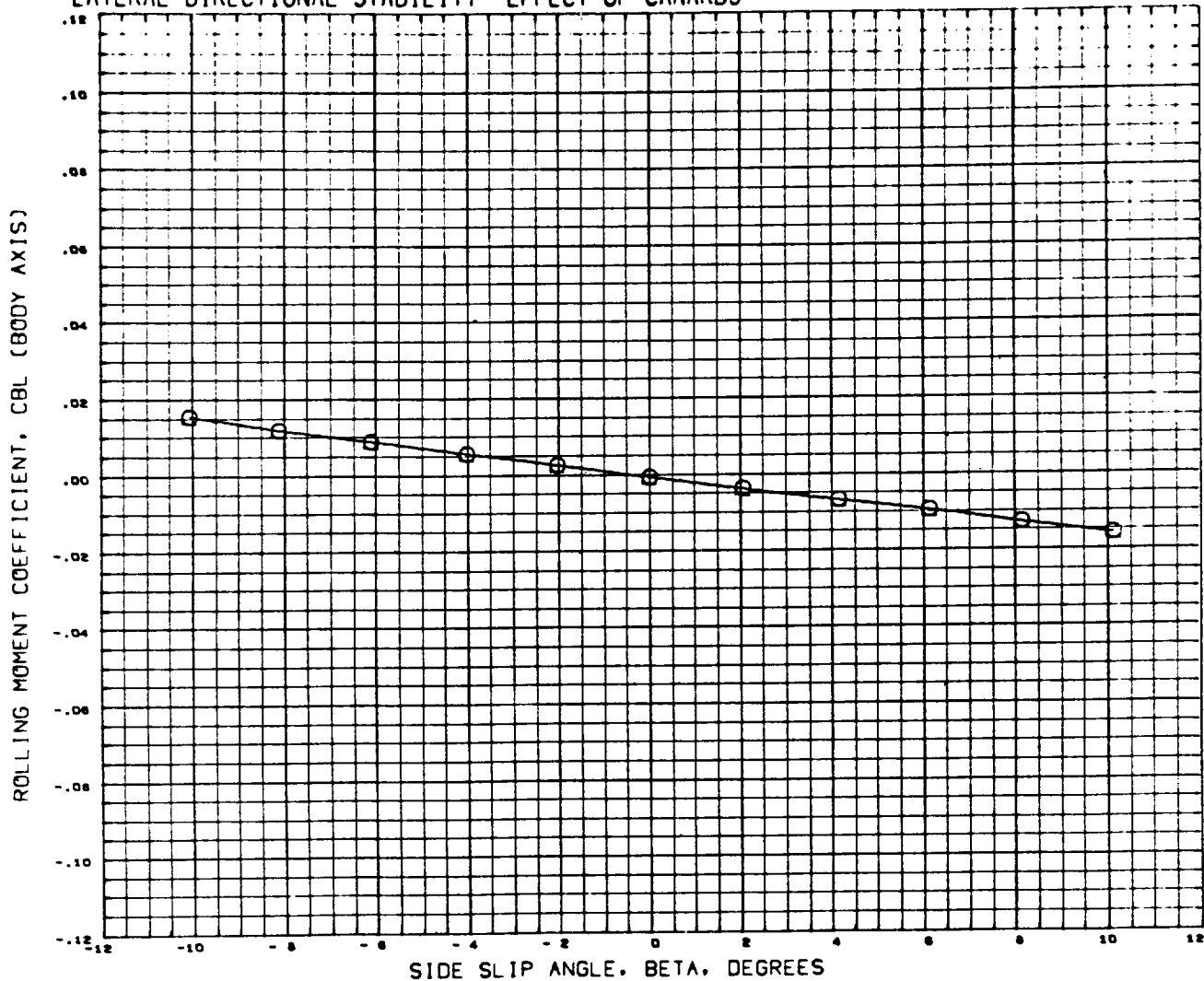
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.958	ALPHA	30.000	DEL	0.000	SREF	7.7005	sq. in.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	in.
		AILRON	0.000	CANARD	-40.000	BREF	4.3920	in.
						XMRP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0025	

DATA HIST. CODE *E

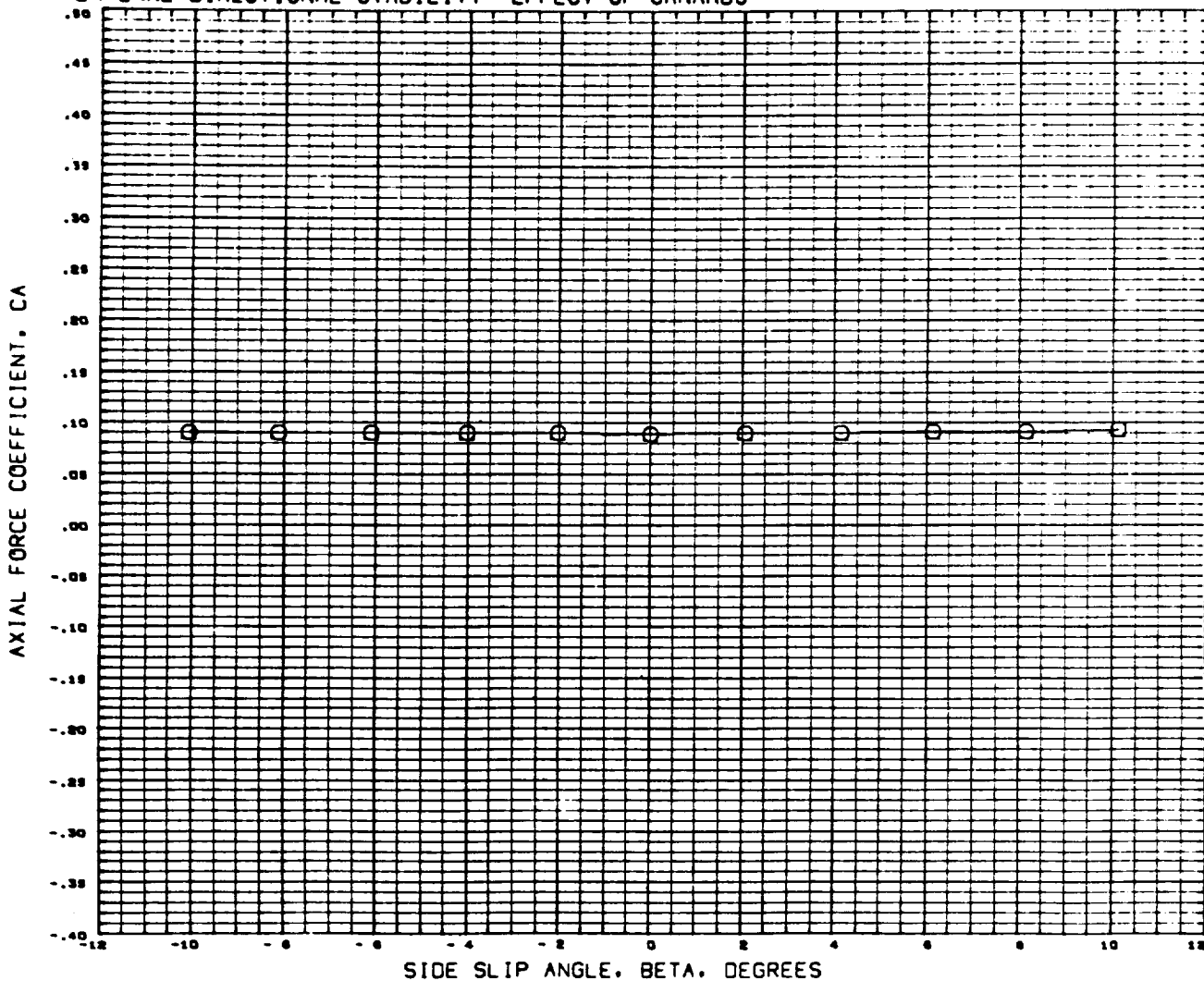
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
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				DEA	0.000	ELEVTR	0.000	LREF	3.1700	IN.
				AILRON	0.000	CANARD	-40.000	BREF	4.3920	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
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								SCALE	0.0025	IN.

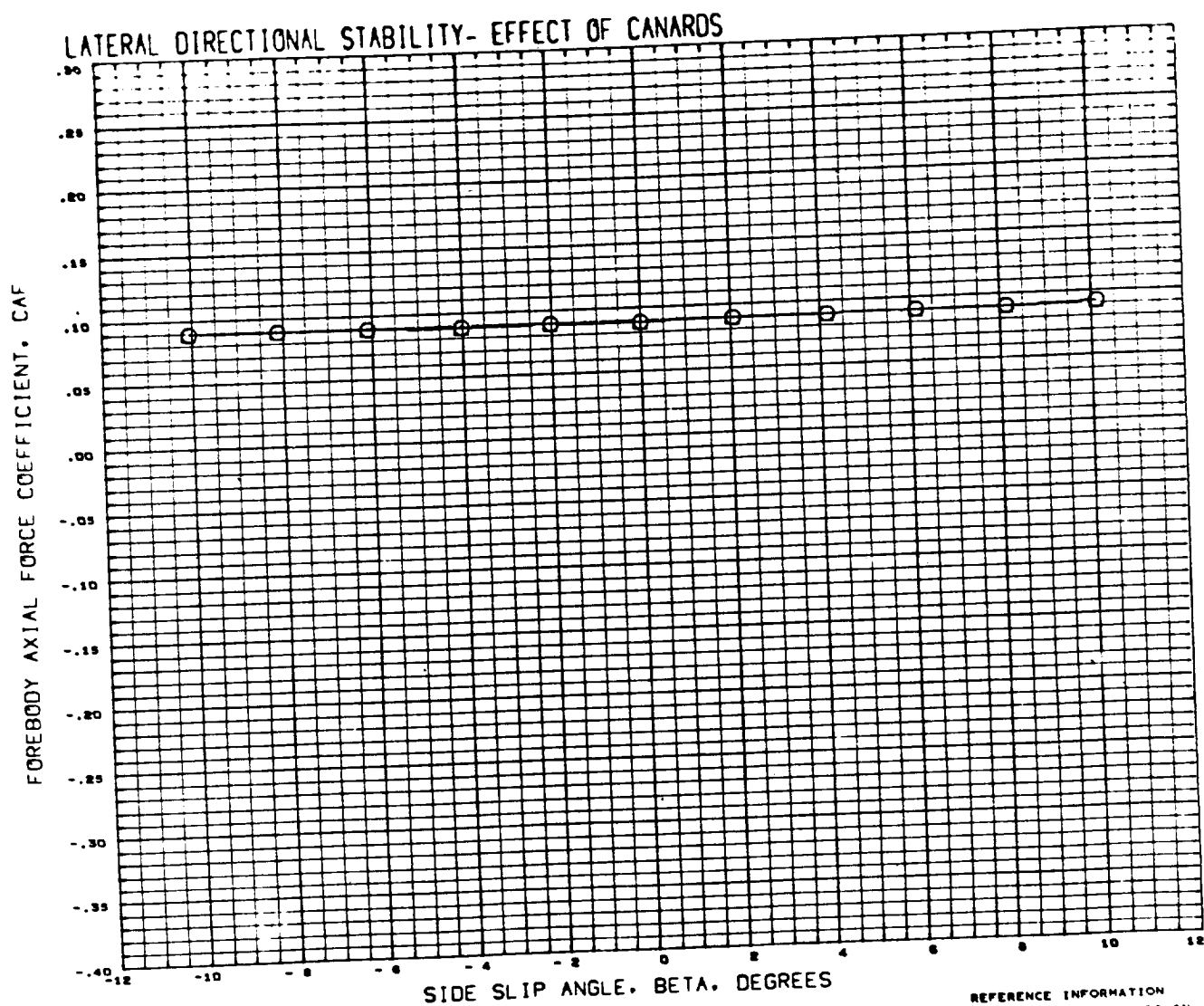
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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DBR	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		ATLRON	0.000	CANARD	- 40.000	BREF	4.3920	IN.
						XHRP	2.4000	IN.
						YHRP	0.0000	IN.
						ZHRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

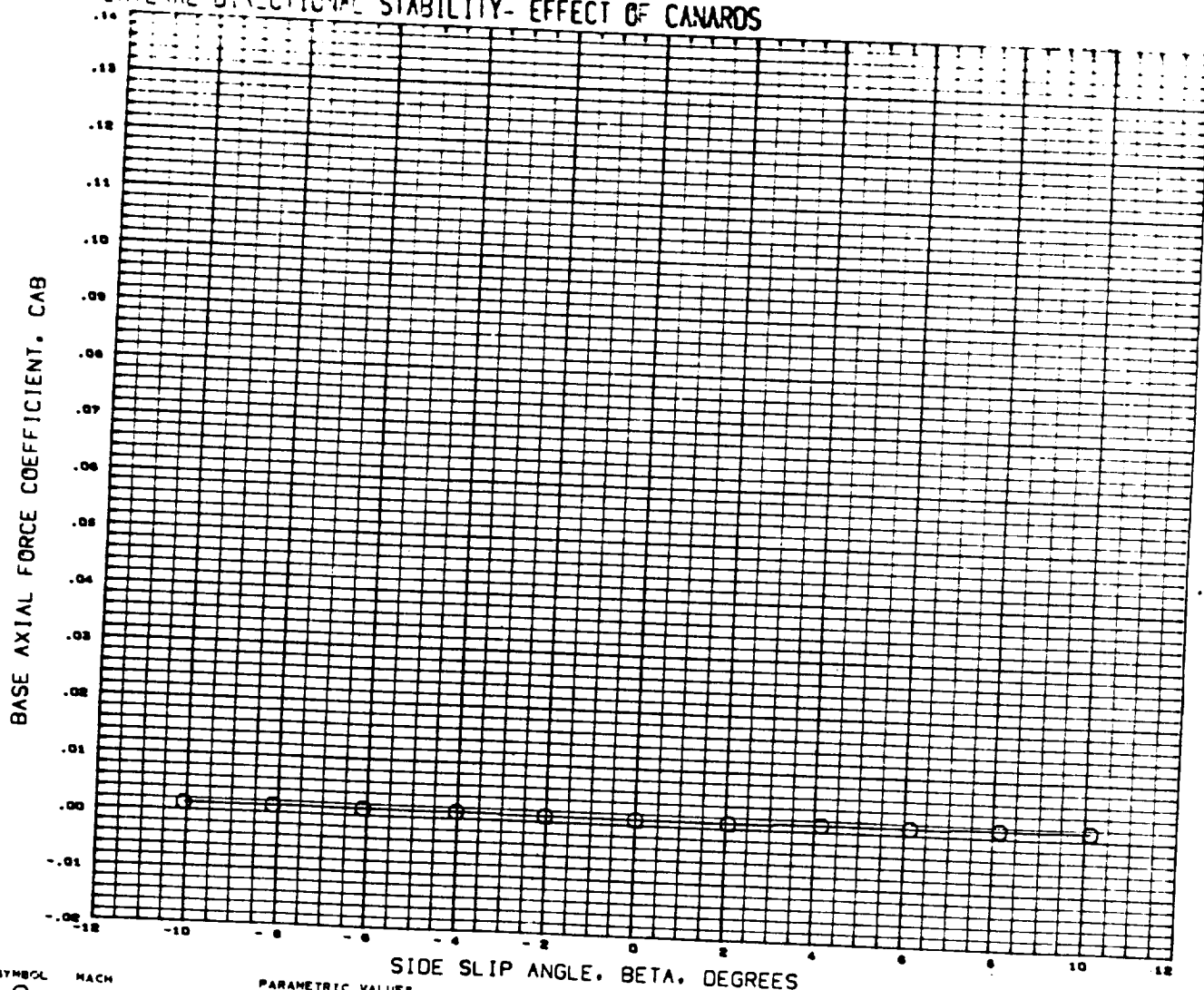


SYMBOL \bigcirc MACH 4.959
 ALPHA 30.000
 DER 0.000
 ATLRON 0.000

PARAMETRIC VALUES
 DEL 0.000
 ELEVTR 0.000
 CANARD - 40.000

REFERENCE INFORMATION
 SREF 7.7005 SQ. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL

○

MACH
4.999

ALPHA
DER
ATLRON

PARAMETRIC VALUES

30.000 DEL 0.000
0.000 ELEVTR 0.000
0.000 CANARD - 40.000

SIDE SLIP ANGLE, BETA, DEGREES

REFERENCE INFORMATION

SREP 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0029

DATA HIST. CODE *C

M496-MSFC

AR11981-3

MODEL

W9B2C12V1

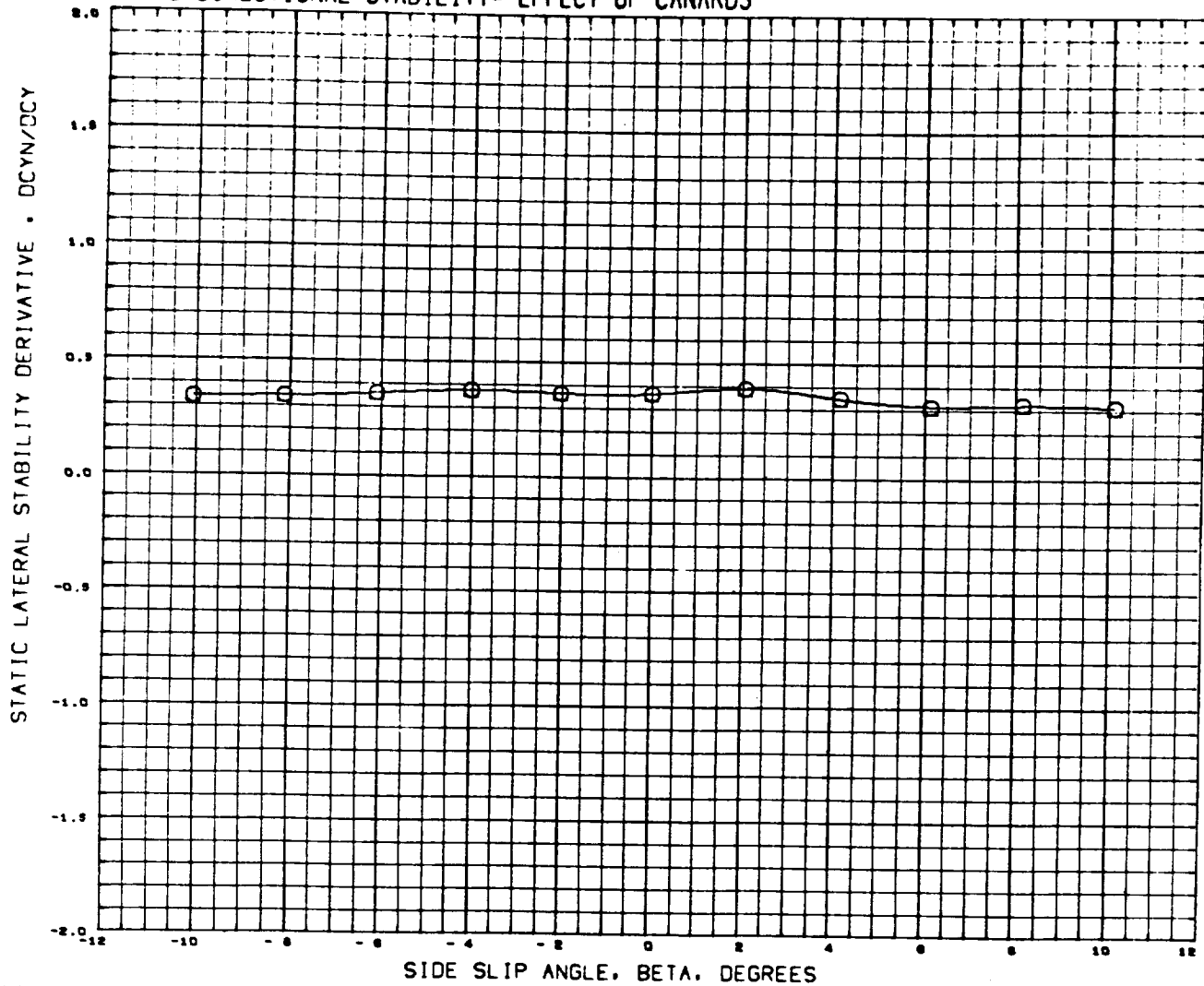
(E38261)

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PAGE

476

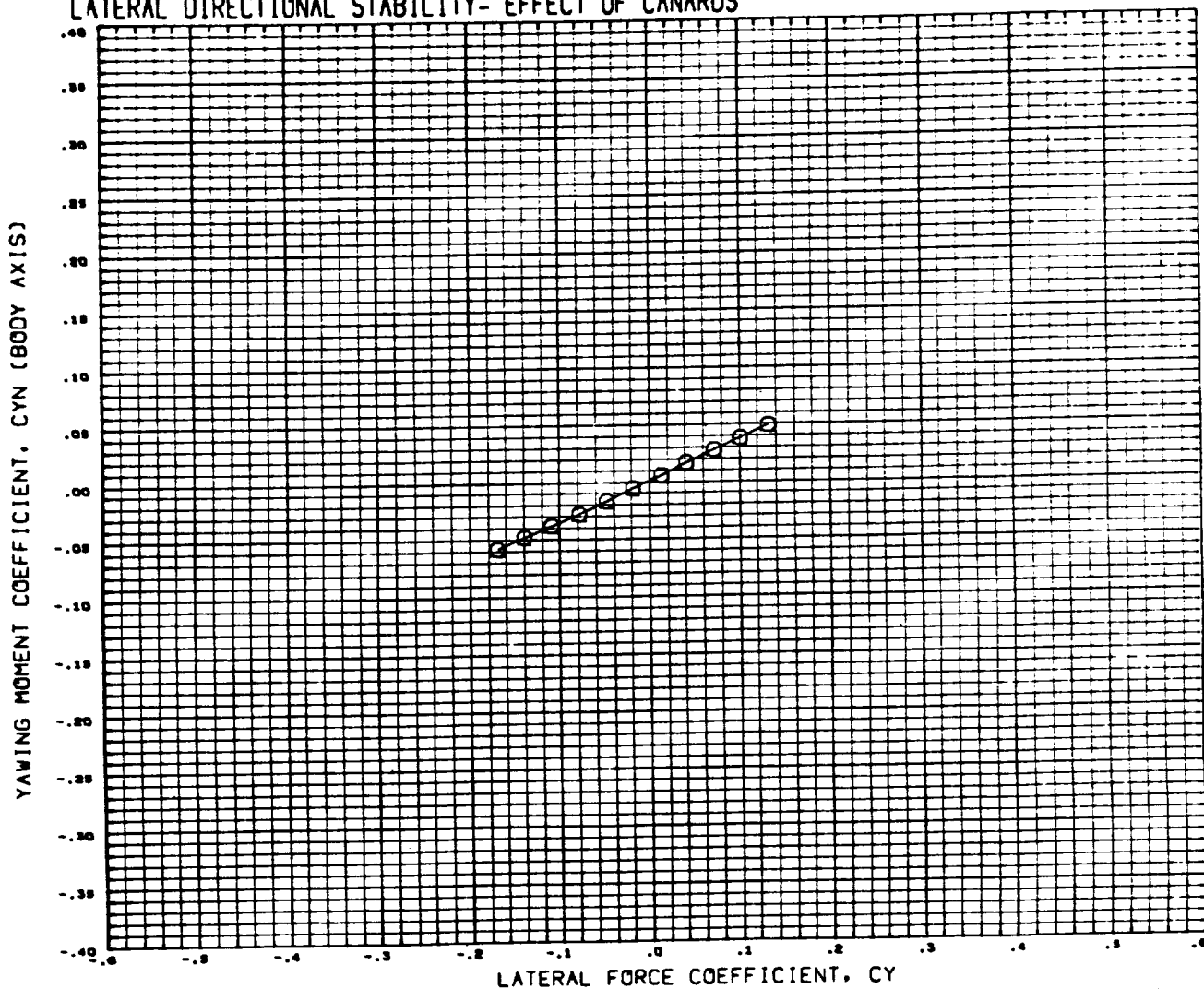
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
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		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		ATLON	0.000	CANARD	- 40.000	GRF	4.3920	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



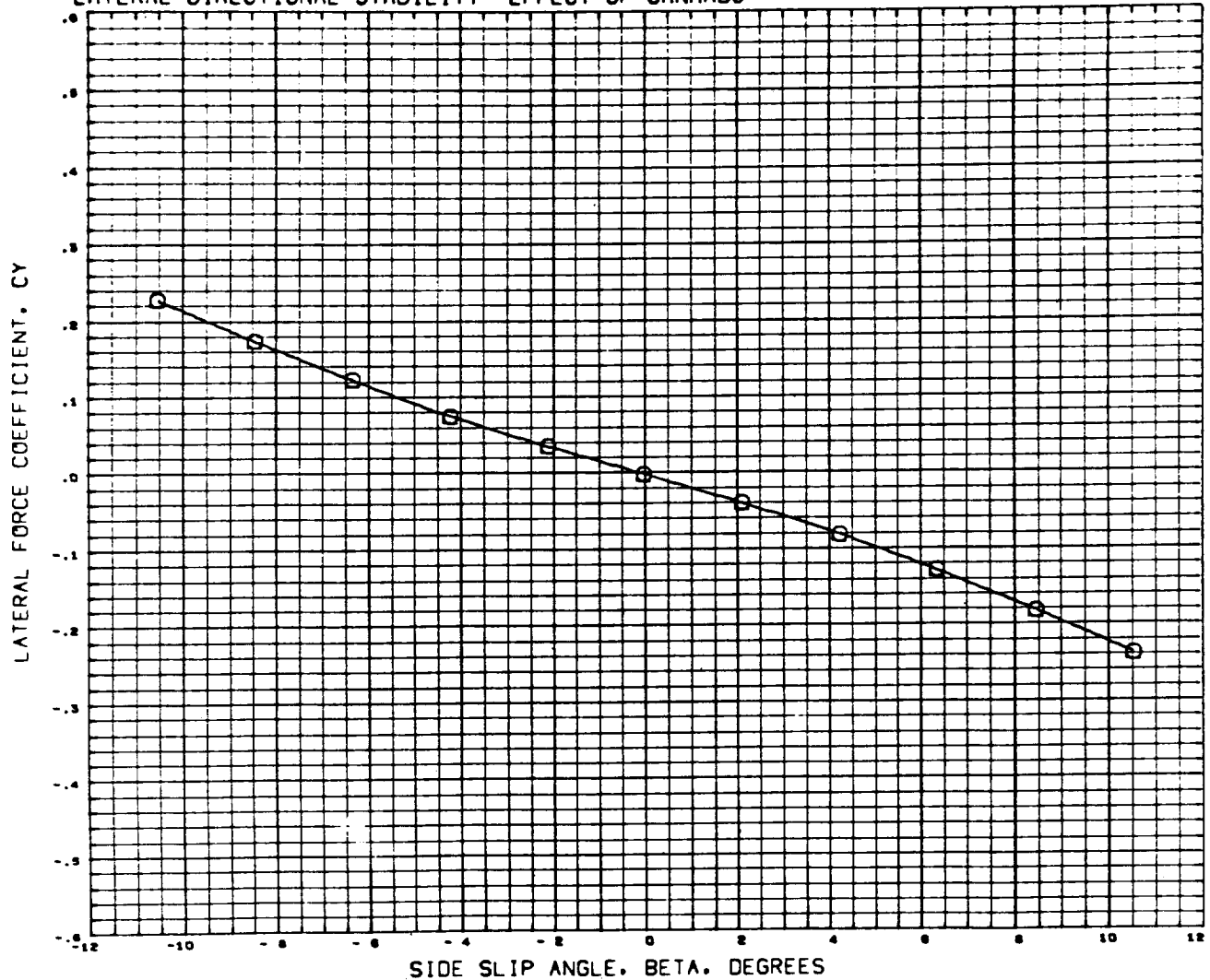
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		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	-40.000

REFERENCE INFORMATION		
SREP	7.7003	30. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0029	

DATA HIST. CODE *E

M496-MSFC AR1198I-3 MODEL W982C12V1 (E38261) 06 SEP 72 PAGE 478

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



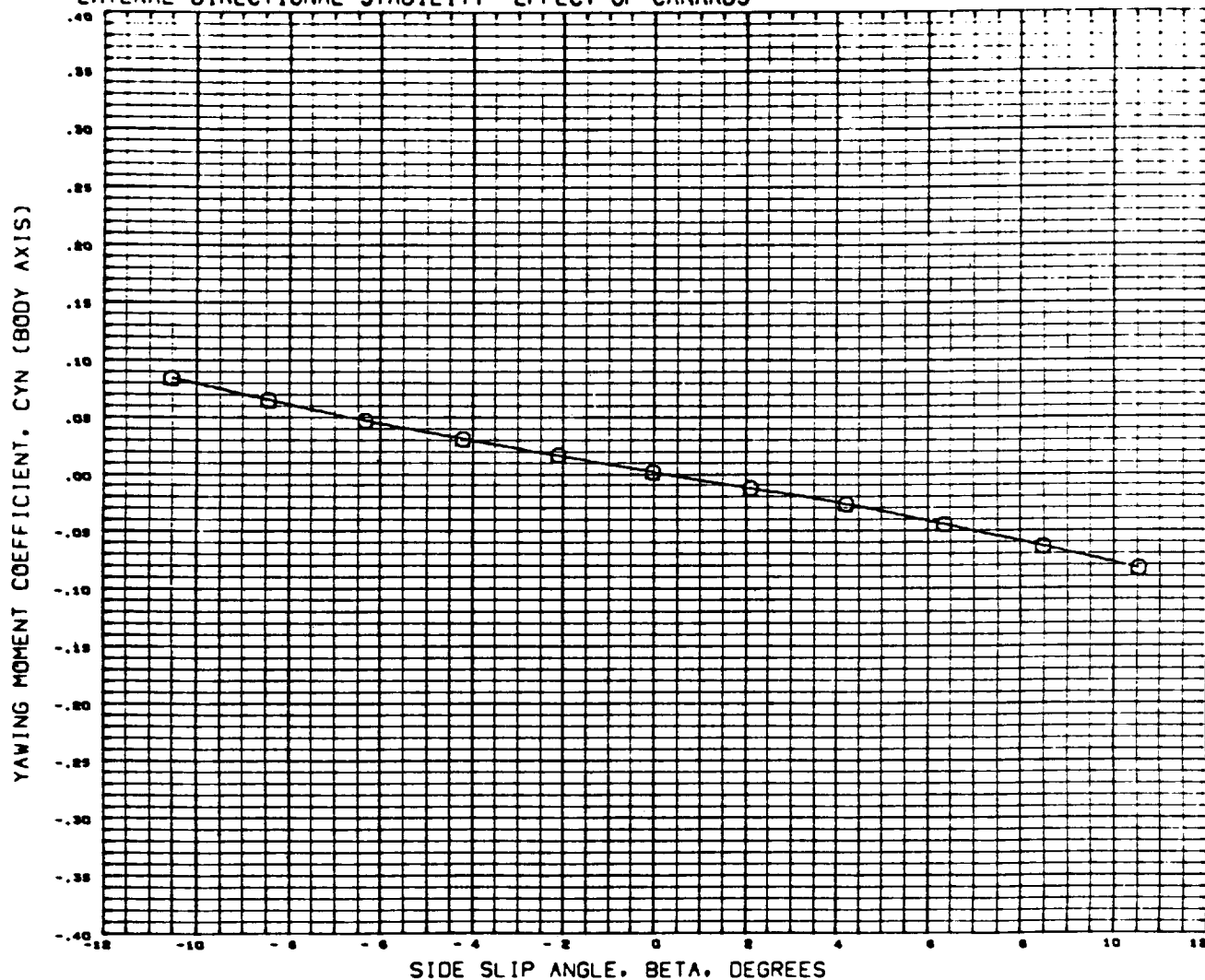
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				DER	0.000	ELEVTR	0.000	LREF	1.6960	IN.
				AIRLON	0.000	CANARD	-20.000	BREF	3.7200	IN.
								XMRP	2.4000	IN.
								YMRP	0.0000	IN.
								ZMRP	0.0000	IN.
								SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W4B2C12V2 (E3830H) 06 SEP 72 PAGE 479

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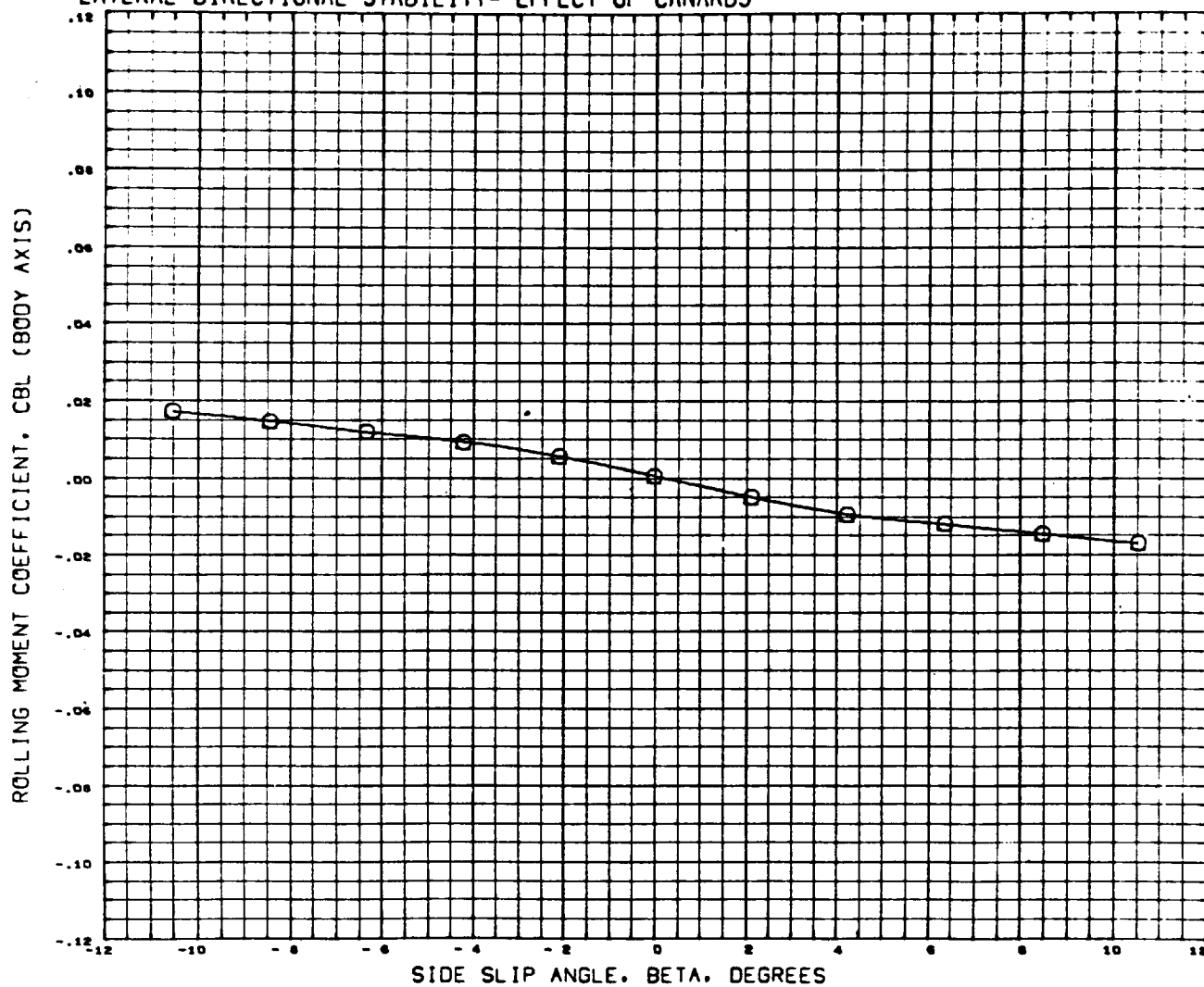
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.939	ALPHA	15.000	DEL	0.000	SREF	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
		AILRON	0.000	CANARD	- 20.000	BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

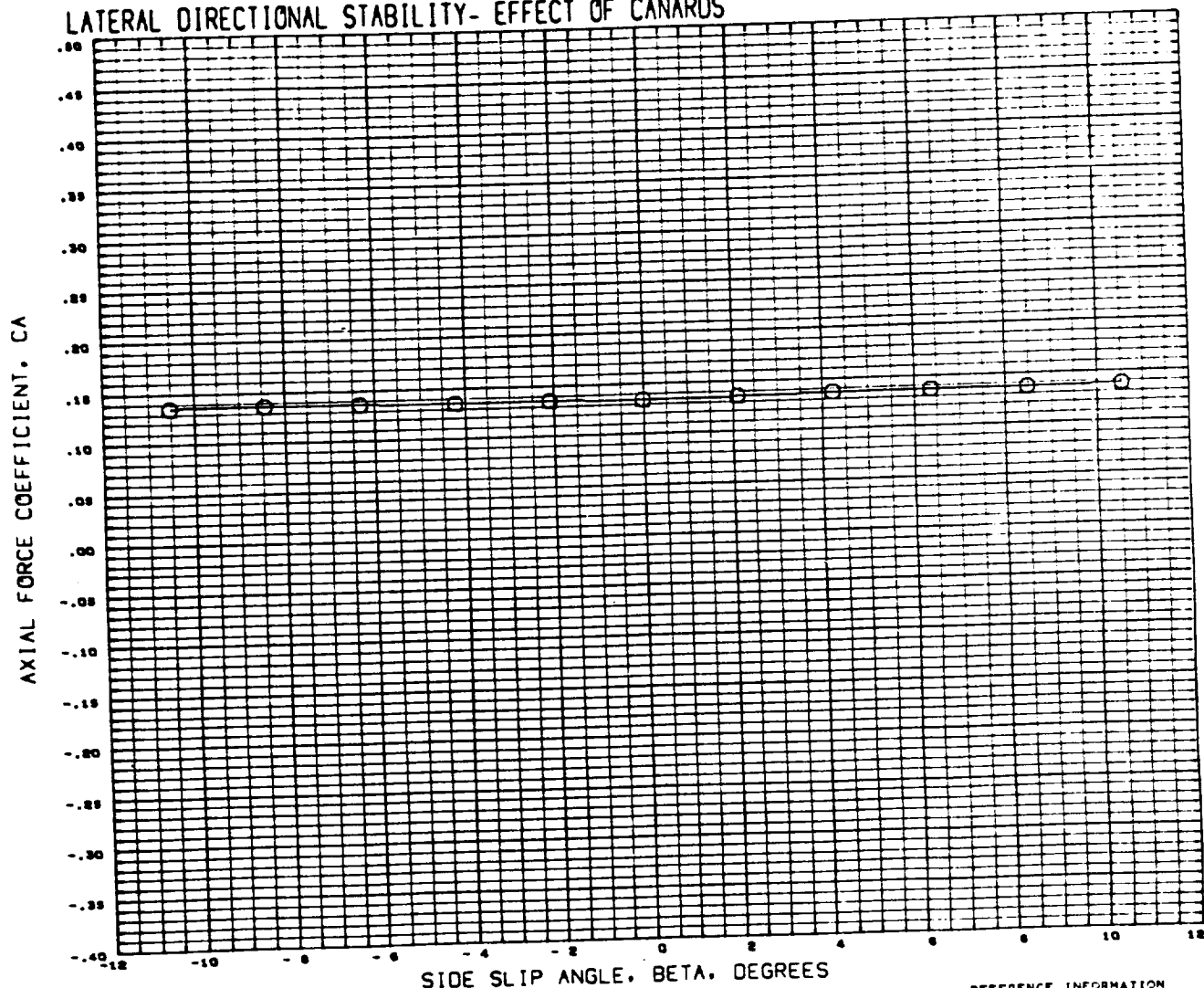


SYMBOL \bigcirc MACH 1.939
 ALPHA 15.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
 BREF 4.9327 SQ. IN.
 LREF 1.6980 IN.
 SREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



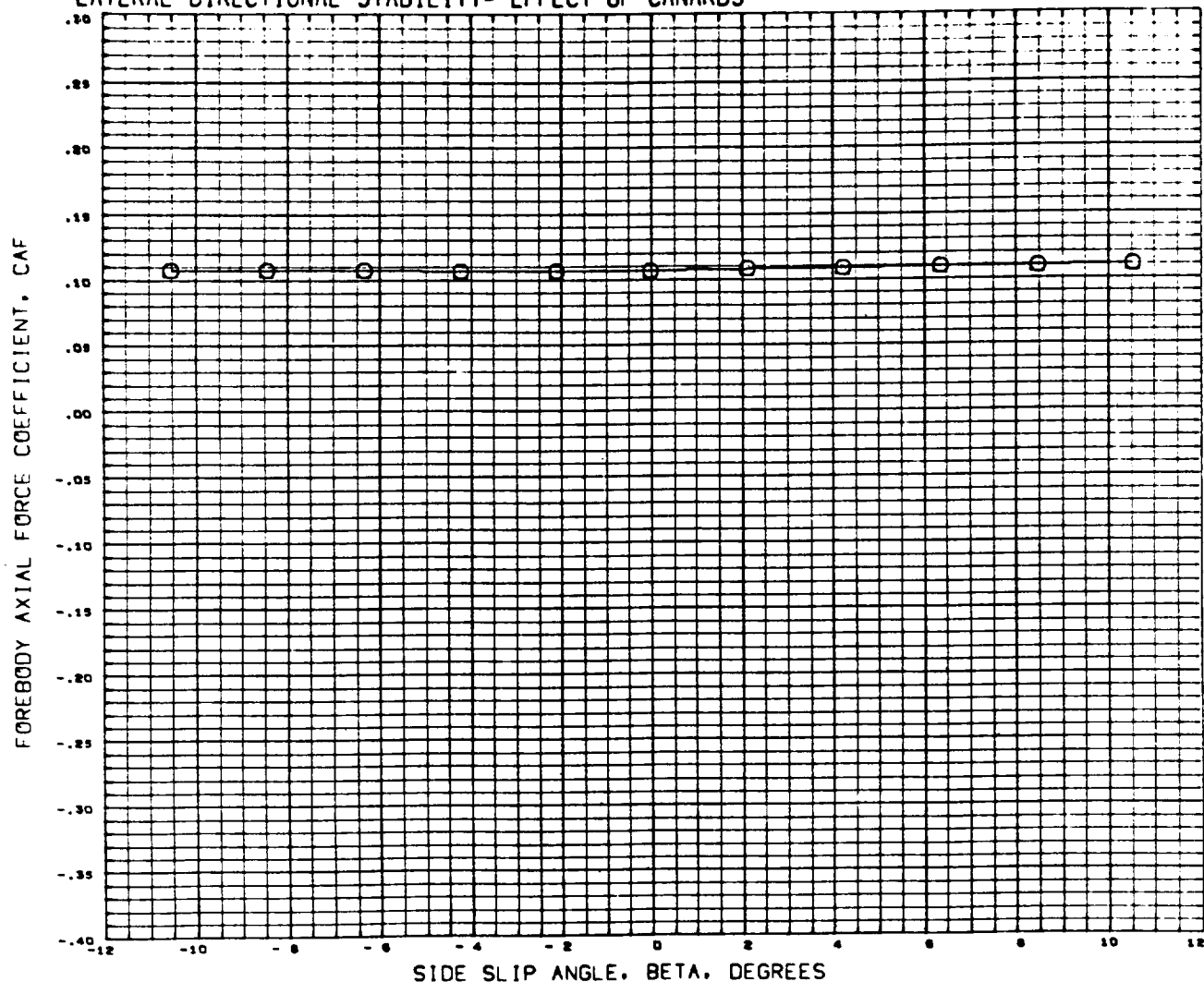
SYMBOL \bigcirc MACH 1.939
 PARAMETRIC VALUES
 ALPHA 15.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
 SREF 4.9327 30. IN.
 LREF 1.8980 IN.
 BREF 3.7200 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE DE

M496-MSFC AR11981-3 MODEL W482C12V2 (E3830H) 06 SEP 72 PAGE 482

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

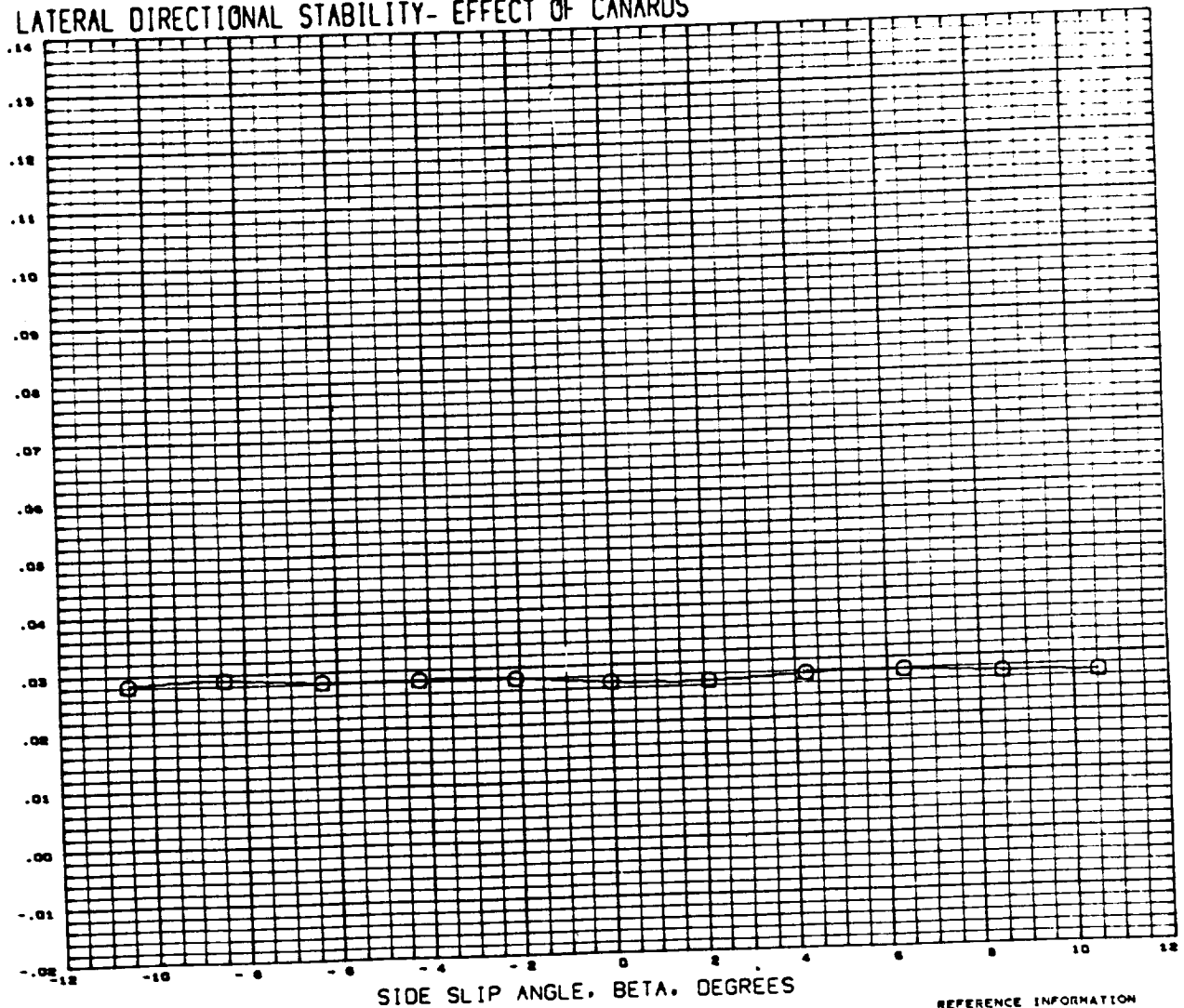


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
O	1.939	15.000	0.000	0.000	-20.000	4.9327	1.6980	3.7200
		DER						
		AILRON				XMRP	YMRP	ZMRP
						0.0000	0.0000	0.0000
						SCALE		
						0.0025		

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

BASE AXIAL FORCE COEFFICIENT, CAB



SYMBOL MACH
O 1.939

PARAMETRIC VALUES
ALPHA 15.000 DEL 0.000
QER 0.000 ELEVTR 0.000
AILRON 0.000 CANARD - 20.000

REFERENCE INFORMATION
SREF 4.9327 53. IN.
LREF 1.8980 IN.
BREF 3.7200 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

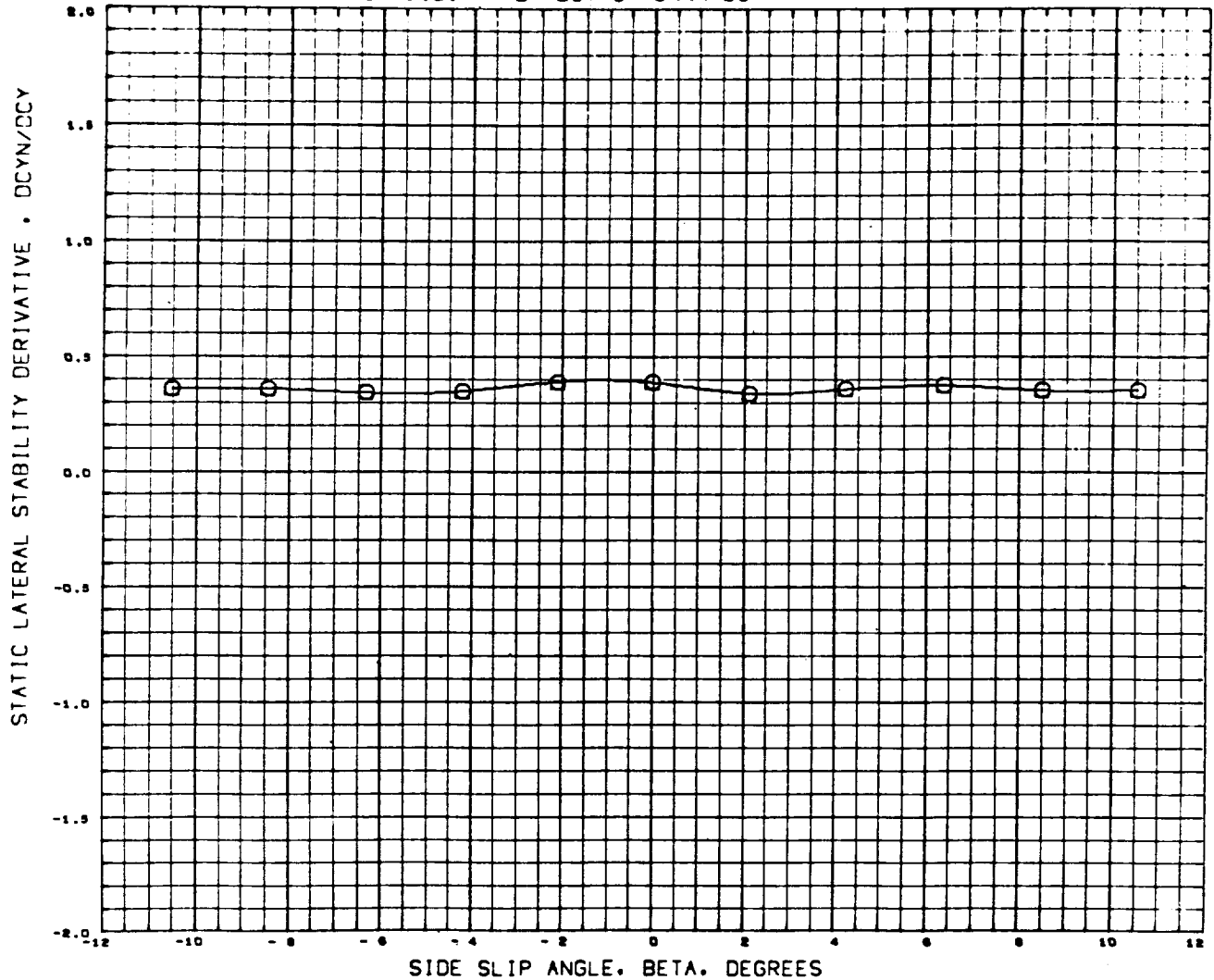
MODEL

W482C12V2

(E3830H) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

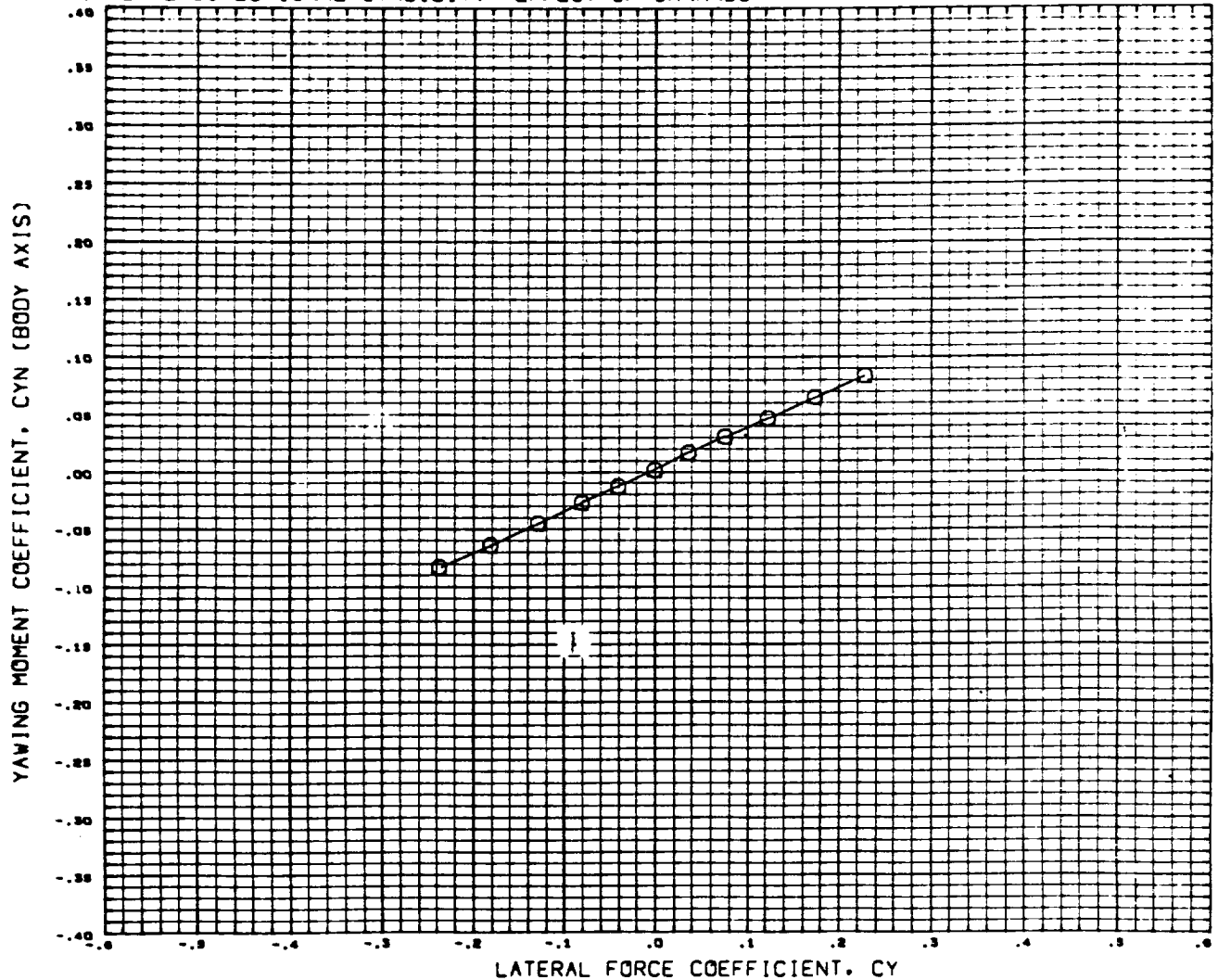


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
O	1.939	ALPHA	15.000	DEL	0.000	SREF	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
		AILRON	0.000	CANARD	-20.000	BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W4B2C12V2 (E3830H) 06 SEP 72 PAGE 485

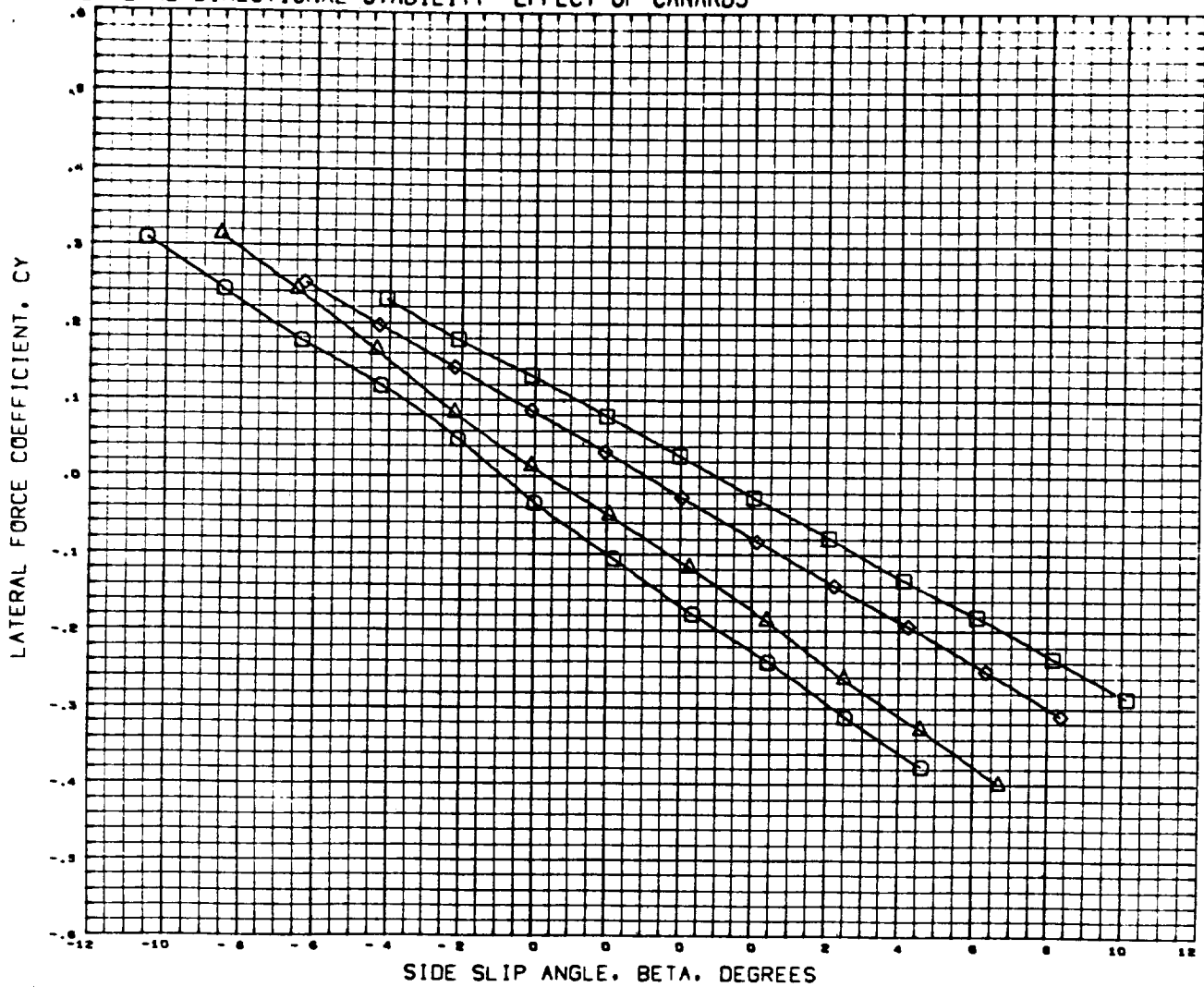
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.939	ALPHA	19.000	OEL	0.000	SREF	4.9327	50. IN.
		DER	0.000	ELEVTR	0.000	LREF	1.8983	IN.
		ATLRON	0.000	CANARD	- 20.000	BREF	3.7200	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE *E

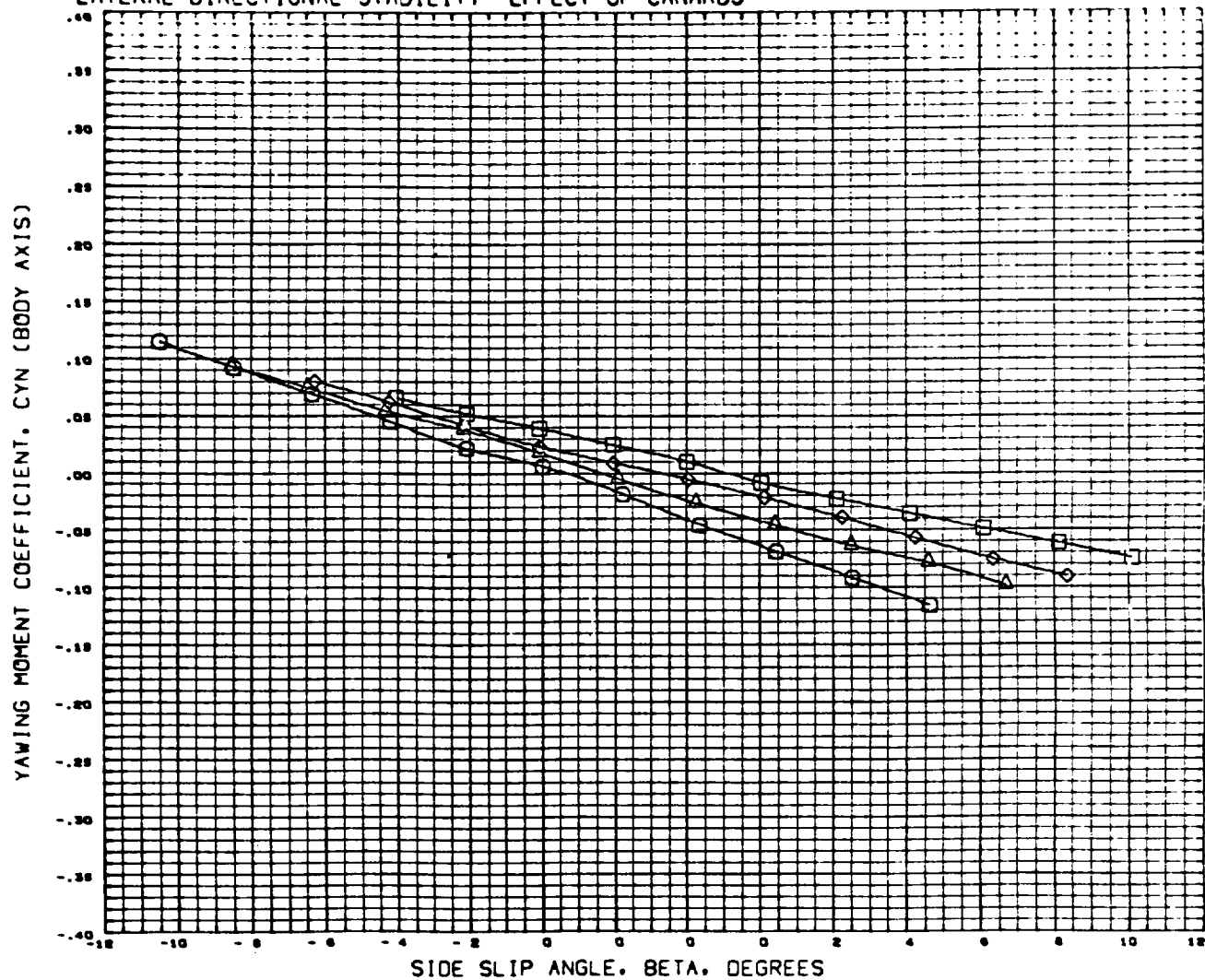
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.197	ALPHA	30.000	DEL	0.000	SREF	4.9327	sq. in.
△	1.951	DER	0.000	ELEVTR	0.000	LRFP	1.6980	in.
◇	3.460	AILRON	0.000	CANARD	- 40.000	SRFP	3.7200	in.
□	4.959					XRFP	2.4000	in.
						YMRP	0.0000	in.
						ZMRP	0.0000	in.
						SCALE	0.0025	

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

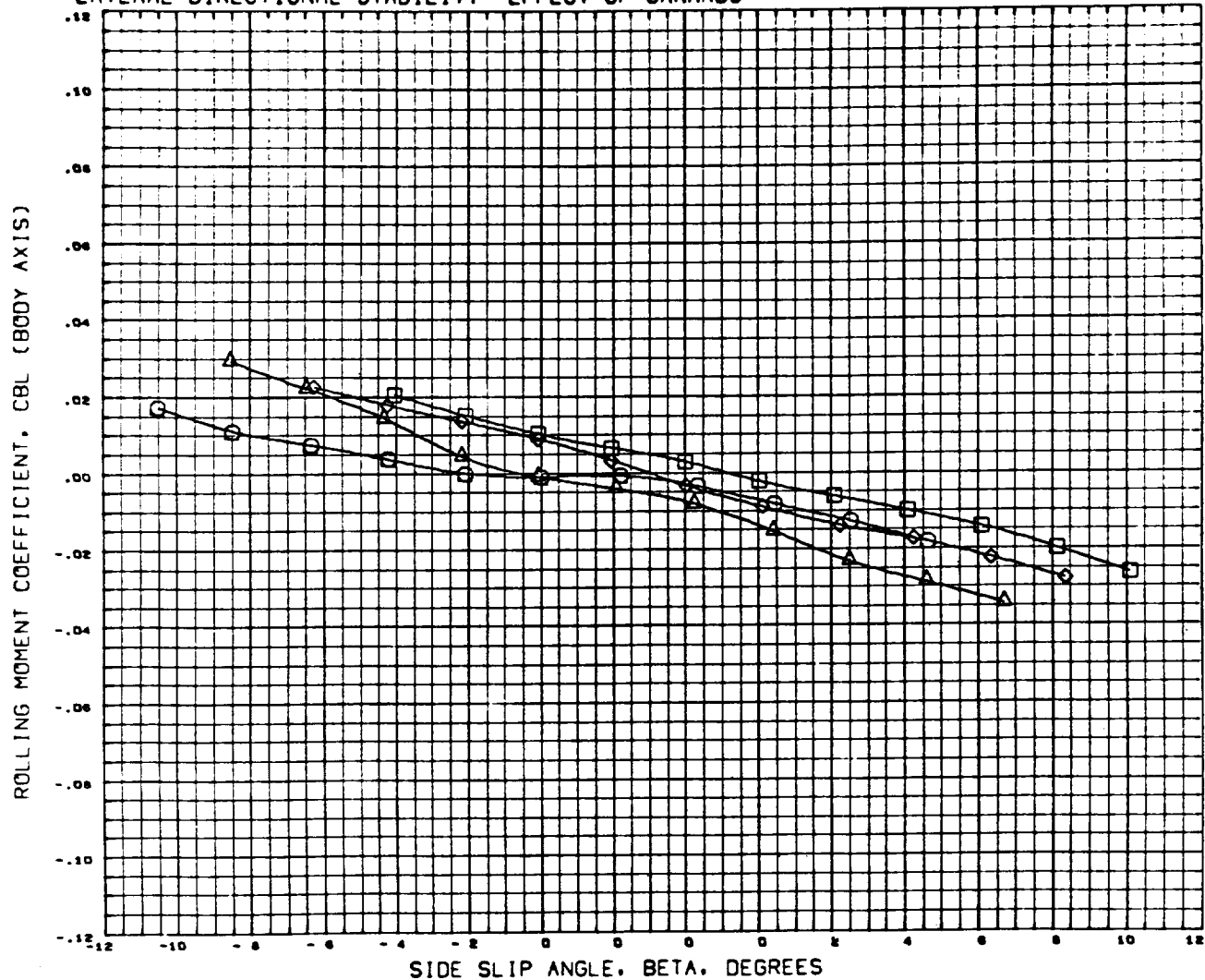


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		ALPHA	DEL	ELEVTR	CANARD	SREF	LREF	BREF
○	1.197	30.000	0.000	0.000		4.9327	1.8980	3.7200
◇	1.951	0.000	0.000	0.000		IN.	IN.	IN.
□	3.480	0.000	0.000	0.000		2.4000	0.0000	0.0000
□	4.959				-40.000	2.0000	0.0023	IN.

DATA HIST. CODE *E

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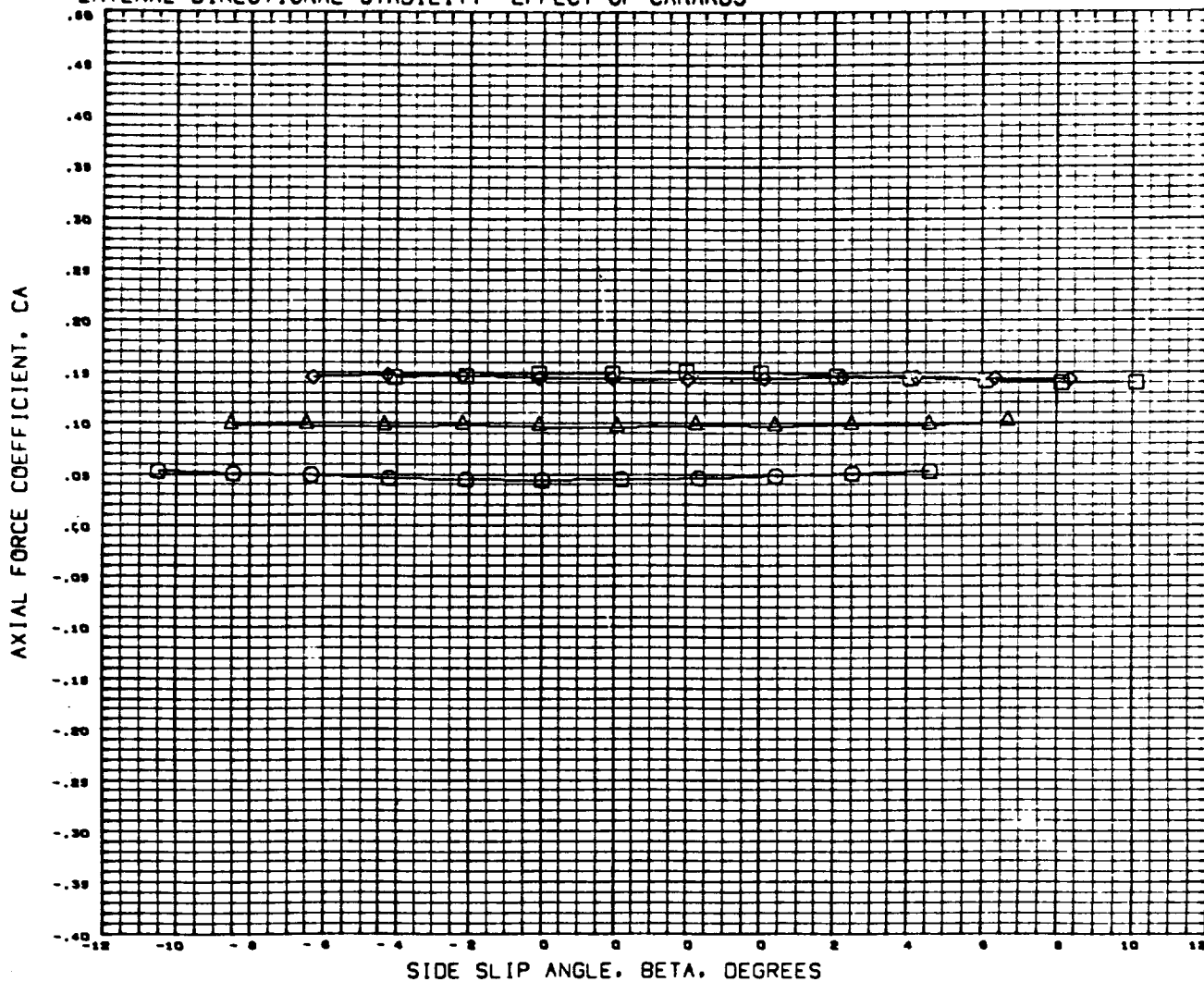
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	ALPHA	PARAMETRIC VALUES	DEL	ELEVTR	CANARD	REFERENCE INFORMATION
○	1.197	30.000	0.000	0.000			BREF 4.9327 SQ. IN.
◇	1.951	0.000	0.000	0.000			LREF 1.8980 IN.
△	3.490	0.000	0.000	0.000			BREF 3.7200 IN.
□	4.959	0.000	0.000	0.000			XNRP 2.4000 IN.
							YNRP 0.0000 IN.
							ZNRP 0.0000 IN.
							SCALE 0.0025

DATA HIST. CODE *E

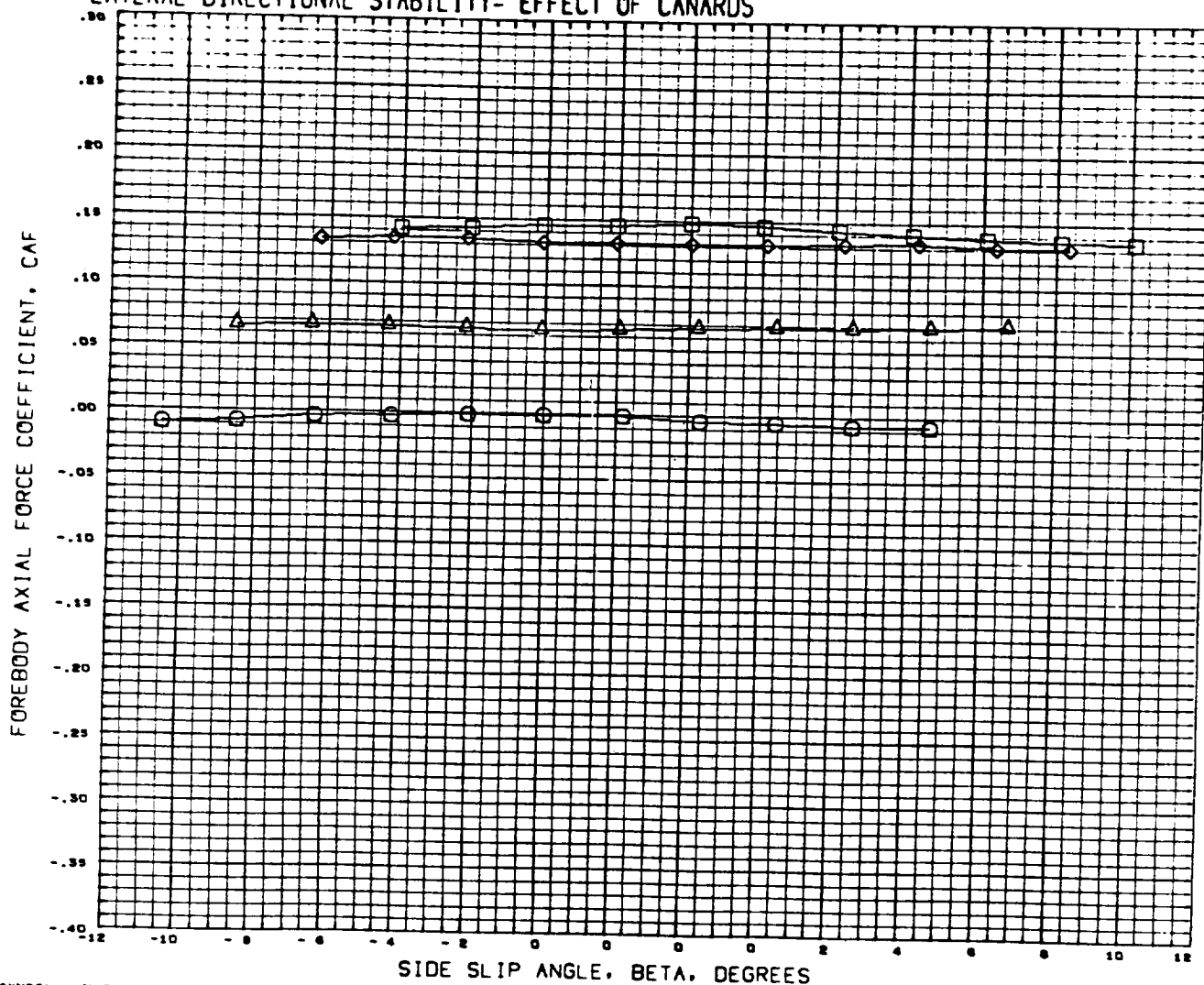
LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES	REFERENCE INFORMATION
○	1.197	ALPHA 30.000 DEL 0.000	SREF 4.9327 SQ. IN.
△	1.991	DER 0.000 ELEVTR 0.000	LREF 1.8980 IN.
◇	3.480	AILRON 0.000 CANARD - 40.000	BREF 3.7200 IN.
□	4.959		XMRP 2.4000 IN.
			YMRP 0.0000 IN.
			ZMRP 0.0000 IN.
			SCALE 0.0025

DATA HIST. CODE *E

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



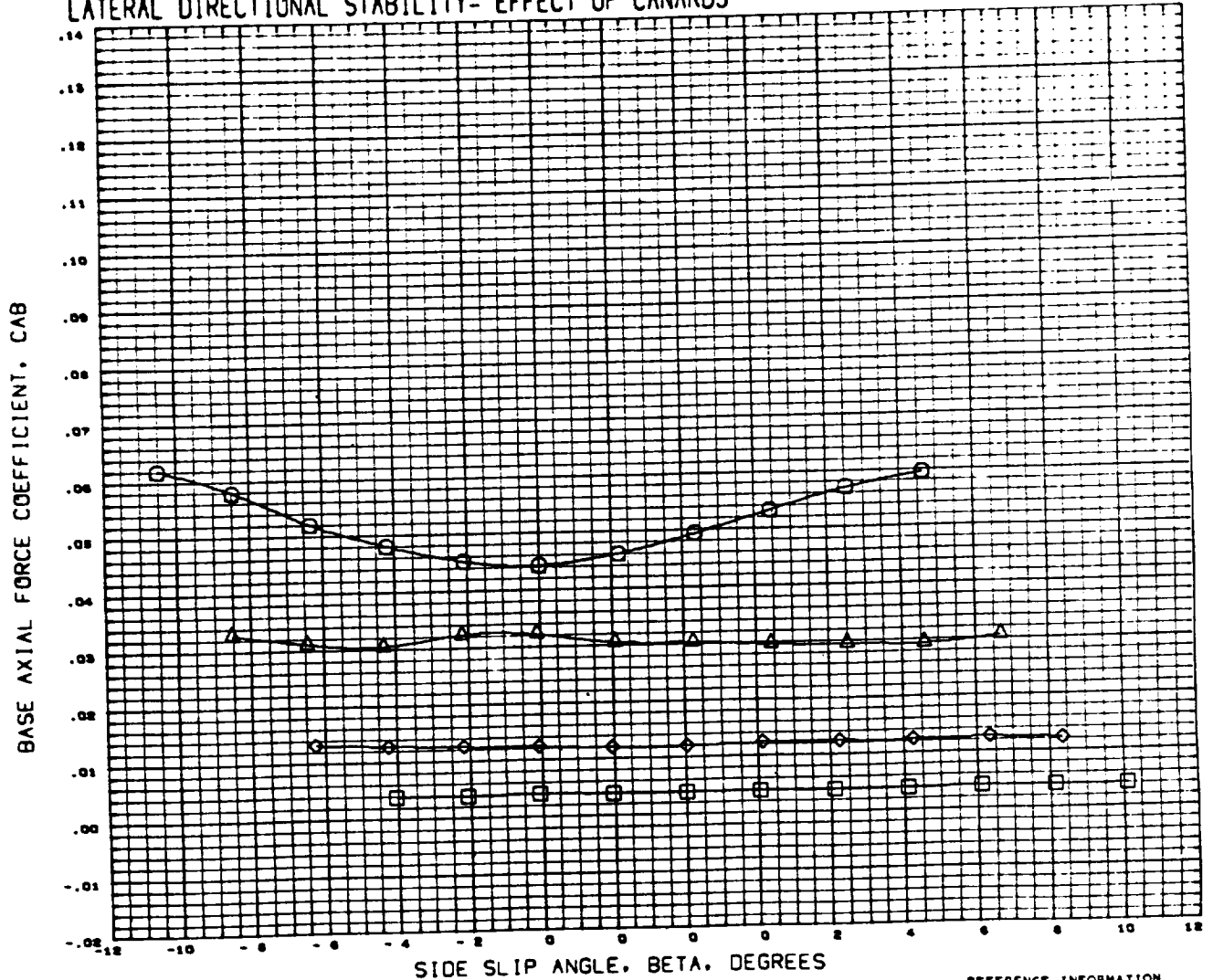
SYMBOL	MACH	PARAMETRIC VALUES			
○	1.197	ALPHA	30.000	DEL	0.000
△	1.951	DER	0.000	ELEVTR	0.000
◇	3.480	AILRON	0.000	CANARD	- 40.000
□	4.959				

REFERENCE INFORMATION		
SREF	4.9327	50. IN.
LREF	1.6980	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W482C12V2 (E38311) 06 SEP 72 PAGE 491

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH		PARAMETRIC VALUES				REFERENCE INFORMATION		
	1.197	ALPHA	30.000	DEL	0.000		SREF	4.9327	50. IN.
○	1.991	DER	0.000	ELEVTR	0.000		LREF	1.8980	IN.
△	3.480	AILRON	0.000	CANARD	- 40.000		BREF	3.7200	IN.
◇	4.939						XMRP	2.4000	IN.
□							YMRP	0.0000	IN.
							ZMRP	0.0000	IN.
							SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

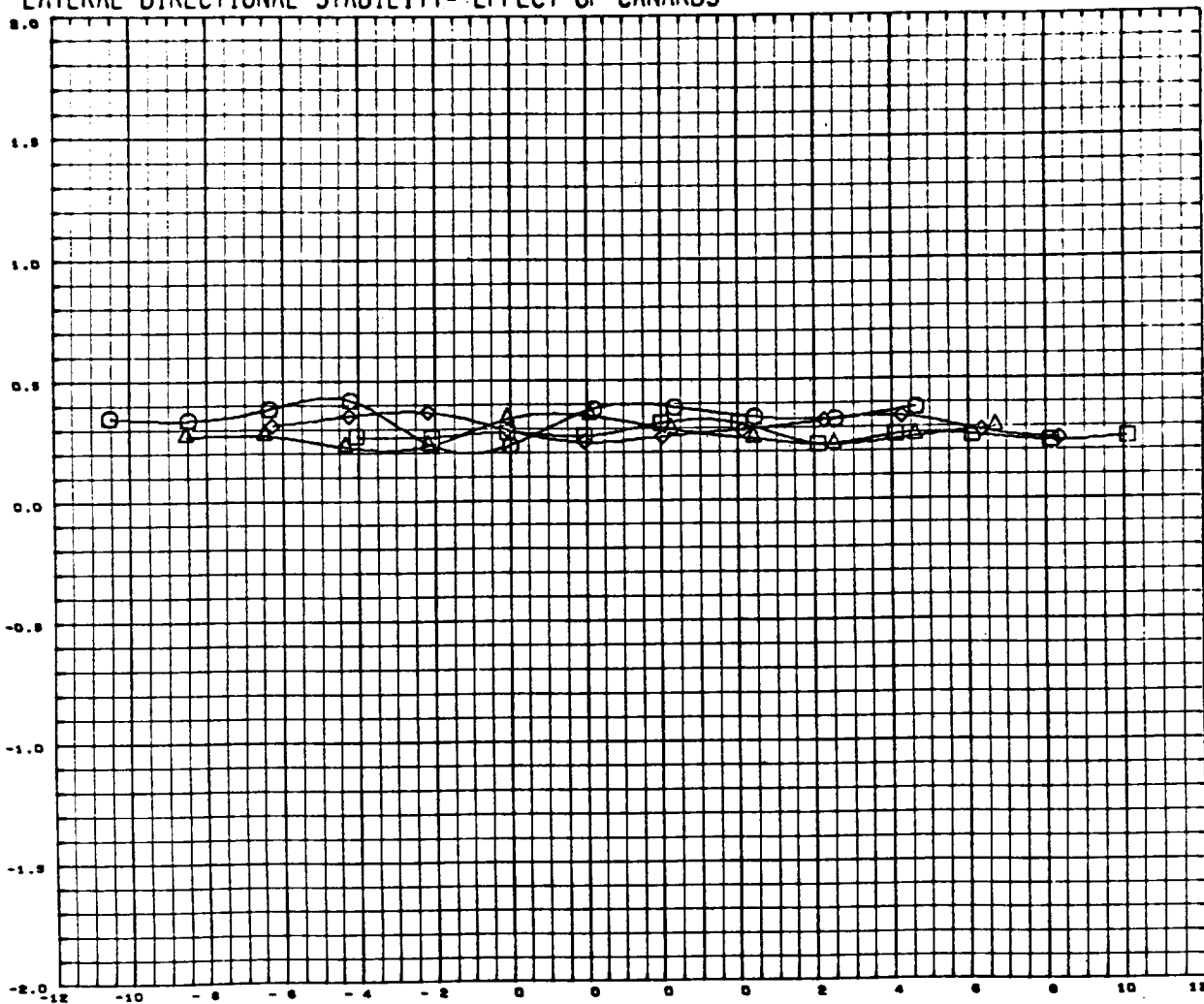
W4B2C12V2

(E38311) 06 SEP 72

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LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS

STATIC LATERAL STABILITY DERIVATIVE • DCYN/DCY



SIDE SLIP ANGLE, BETA, DEGREES

SYMBOL
○
◇
△
□

MACH
1.197
1.951
3.490
4.959

PARAMETRIC VALUES
ALPHA
DER
ATLRON

30.000 DEL 0.000
0.000 ELEVTR 0.000
0.000 CANARD - 40.000

REFERENCE INFORMATION

SREF 4.9327 SQ. IN.
LREF 1.8980 IN.
BREF 3.7200 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

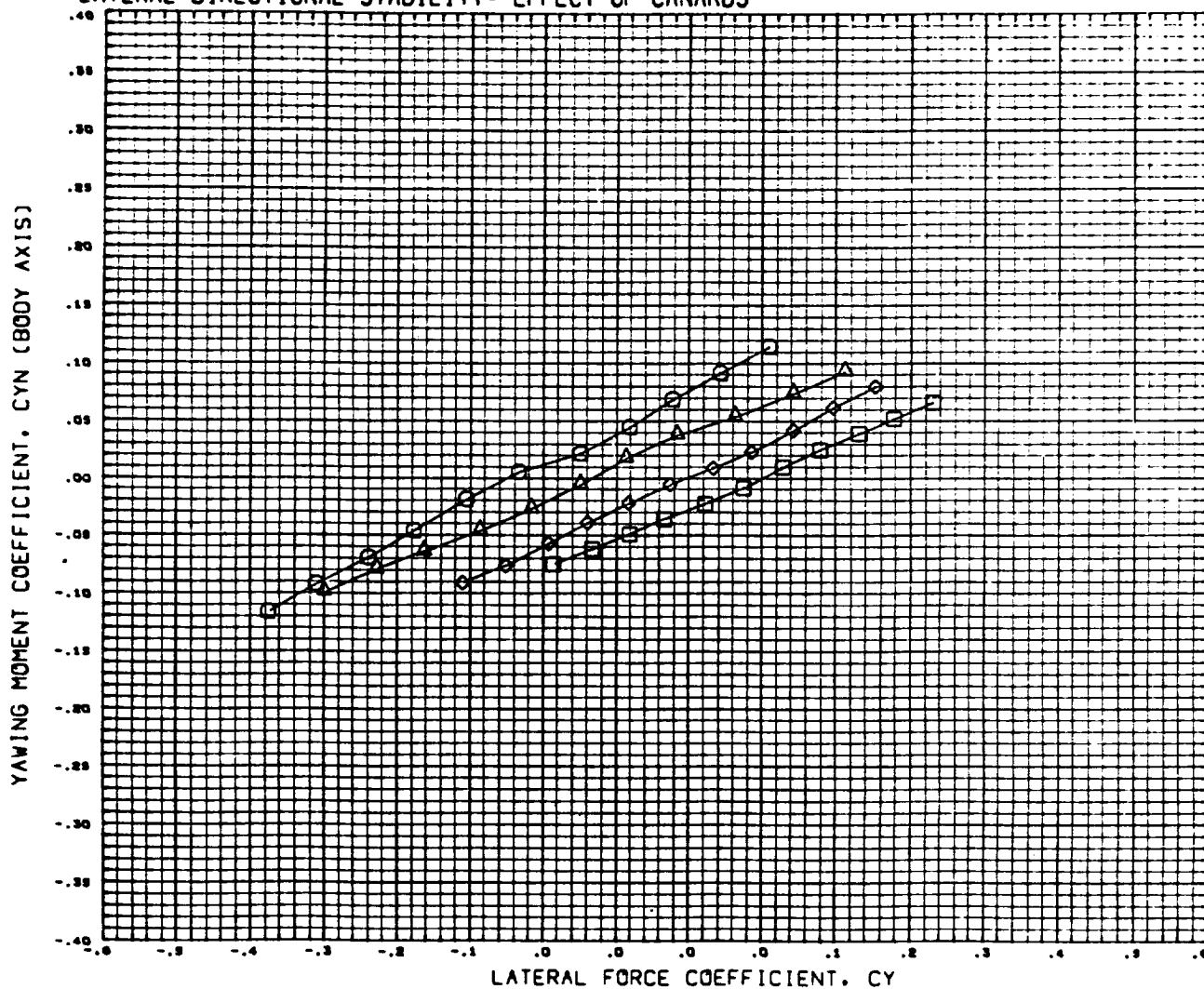
MODEL

W4B2C12V2

(E38311) 06 SEP 72

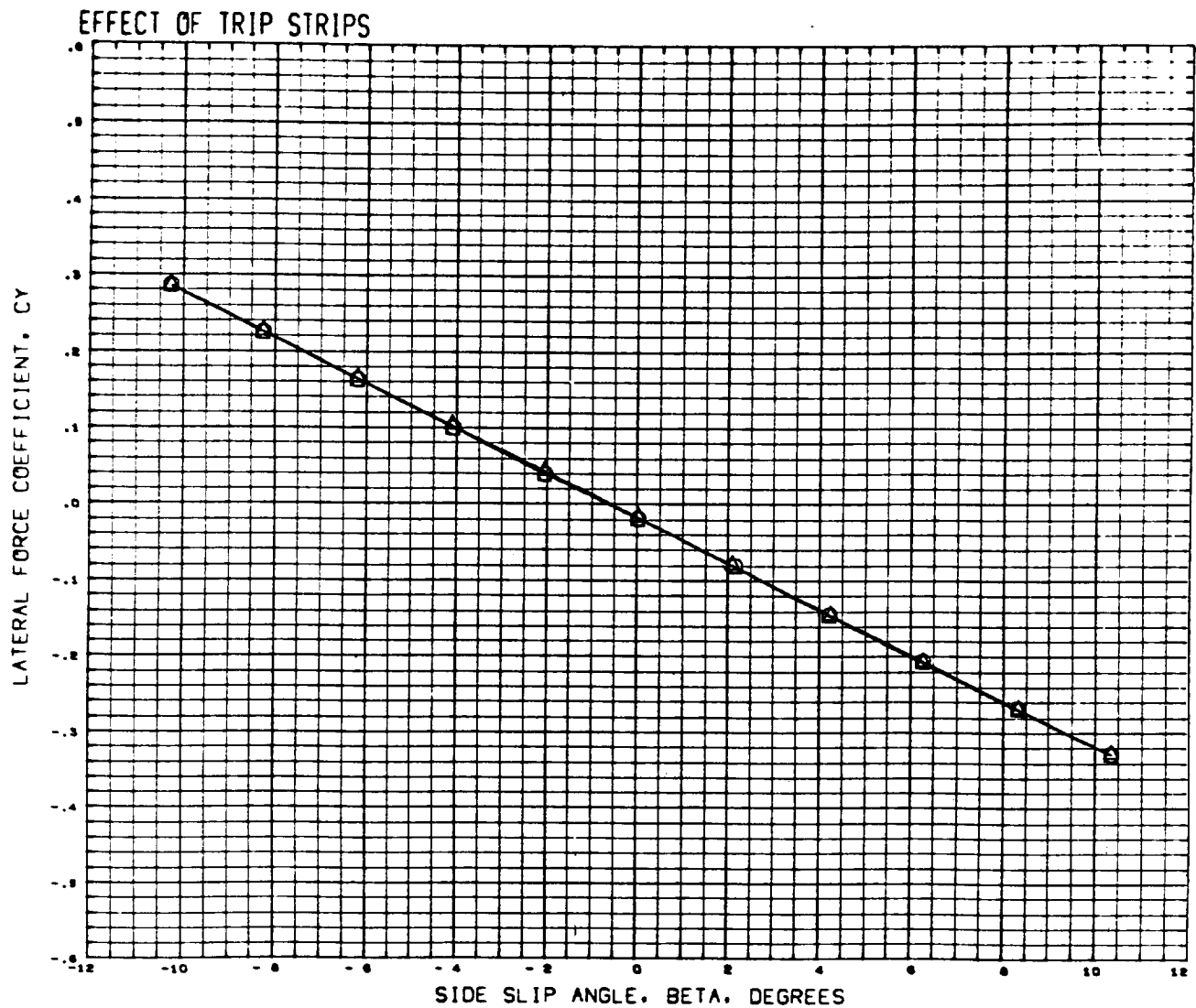
PAGE 493

LATERAL DIRECTIONAL STABILITY- EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	1.197	ALPHA	30.000	DEL	0.000	SREF	4.9327	50. IN.
△	1.951	DER	0.000	ELEVTR	0.000	LREF	1.8980	IN.
◇	3.480	AILRON	0.000	CANARD	-40.000	BREF	3.7200	IN.
□	4.959					XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

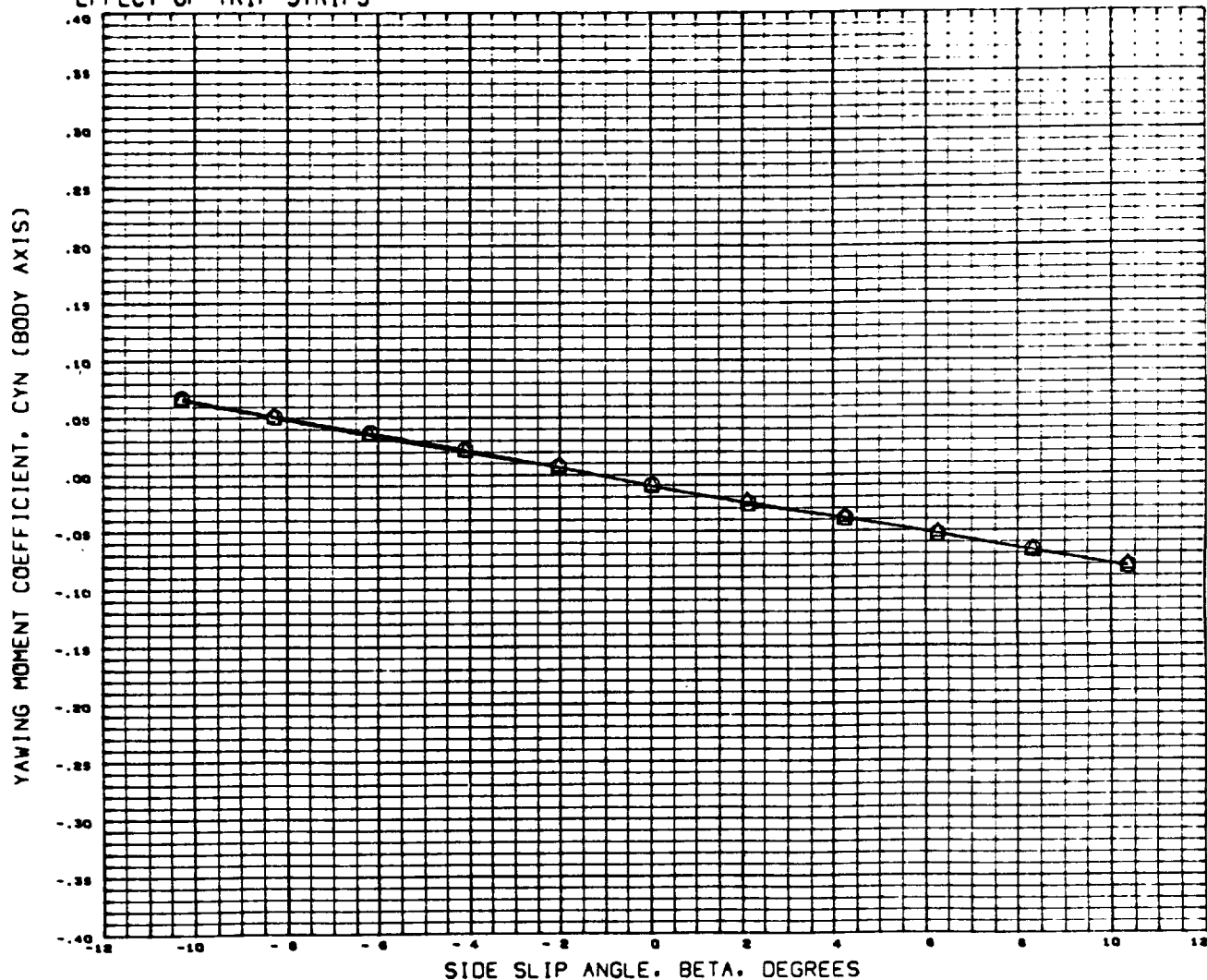
DATA HIST. CODE *E



DATA SET SYMBOL		CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(Z38197)	○	M496-MSFC AR11981-3 MODEL W8B2C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.8225 SQ. IN.
(G38191)	△	M496-MSFC AR11981-3 MODEL W8B2C12V2	30.000	-40.000	0.000	0.000	LREF	1.9360 IN.
							BREF	4.3000 IN.
							KMRP	2.4000 IN.
							YMRP	0.0000 IN.
							ZMRP	0.0000 IN.
							SCALE	0.0025

MACH 3.480

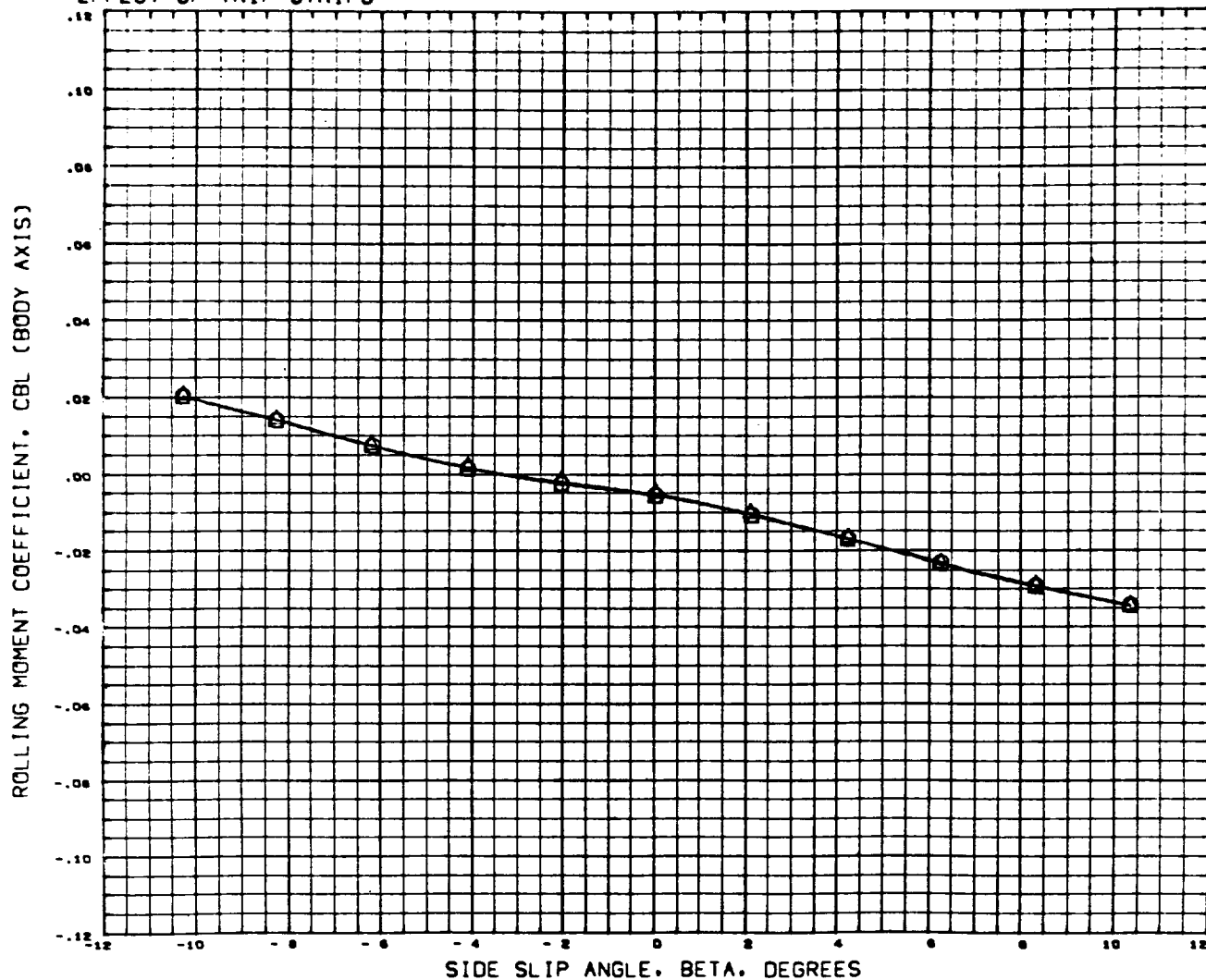
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION		
(239197)	M496-M5FC AR11981-3 MODEL W682C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225	30. IN.
(639197)	M496-M5FC AR11981-3 MODEL W682C12V2	30.000	-40.000	0.000	0.000	LREF	1.9360	IN.
						BREF	4.3000	IN.
						XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

MACH 3.480

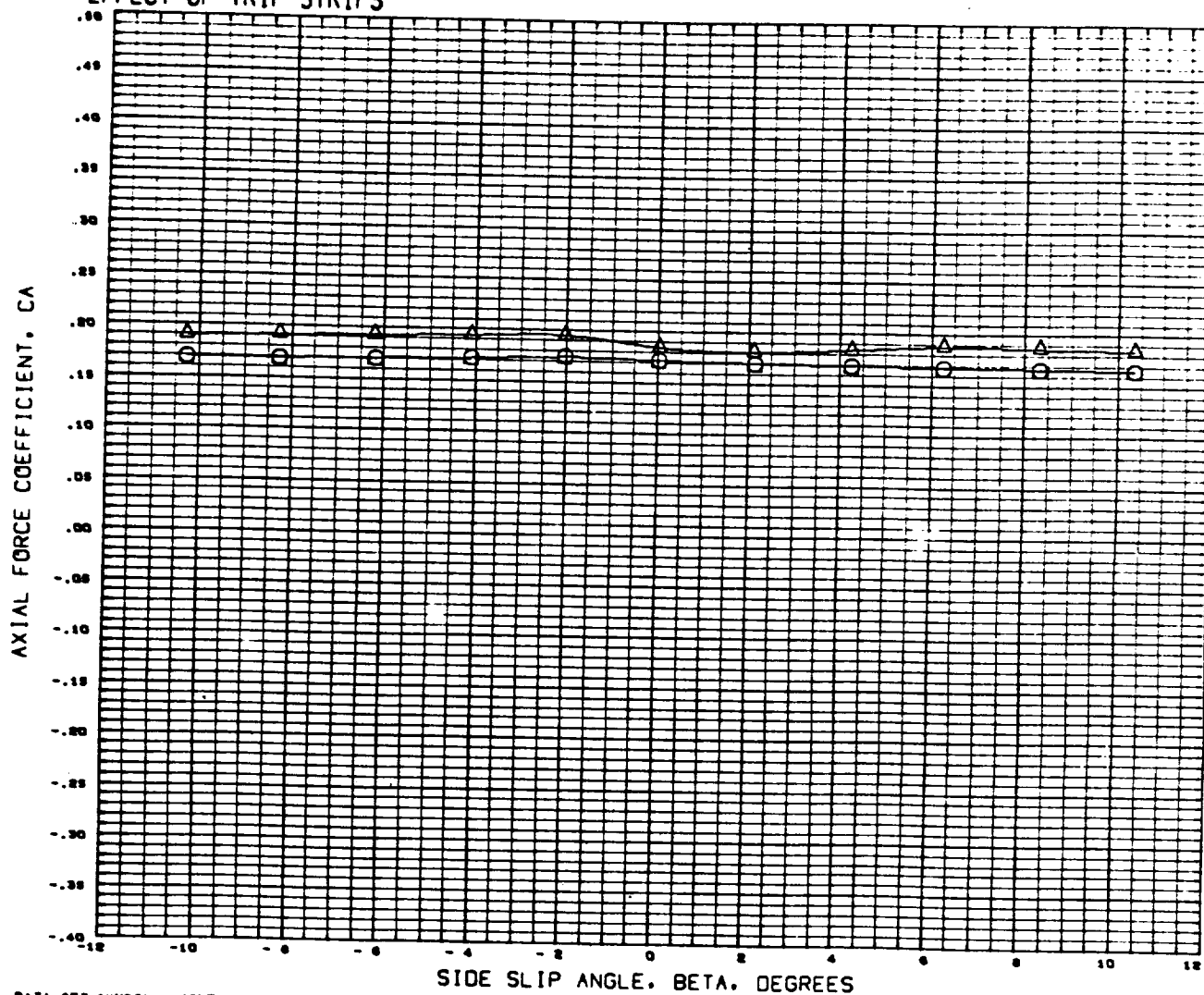
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(238197)	M496-MSFC AR11981-3 MODEL W8B2C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225 30. IN.
(638191)	M496-MSFC AR11981-3 MODEL W8B2C12V2	30.000	-40.000	0.000	0.000	LREF	1.3360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 3.480

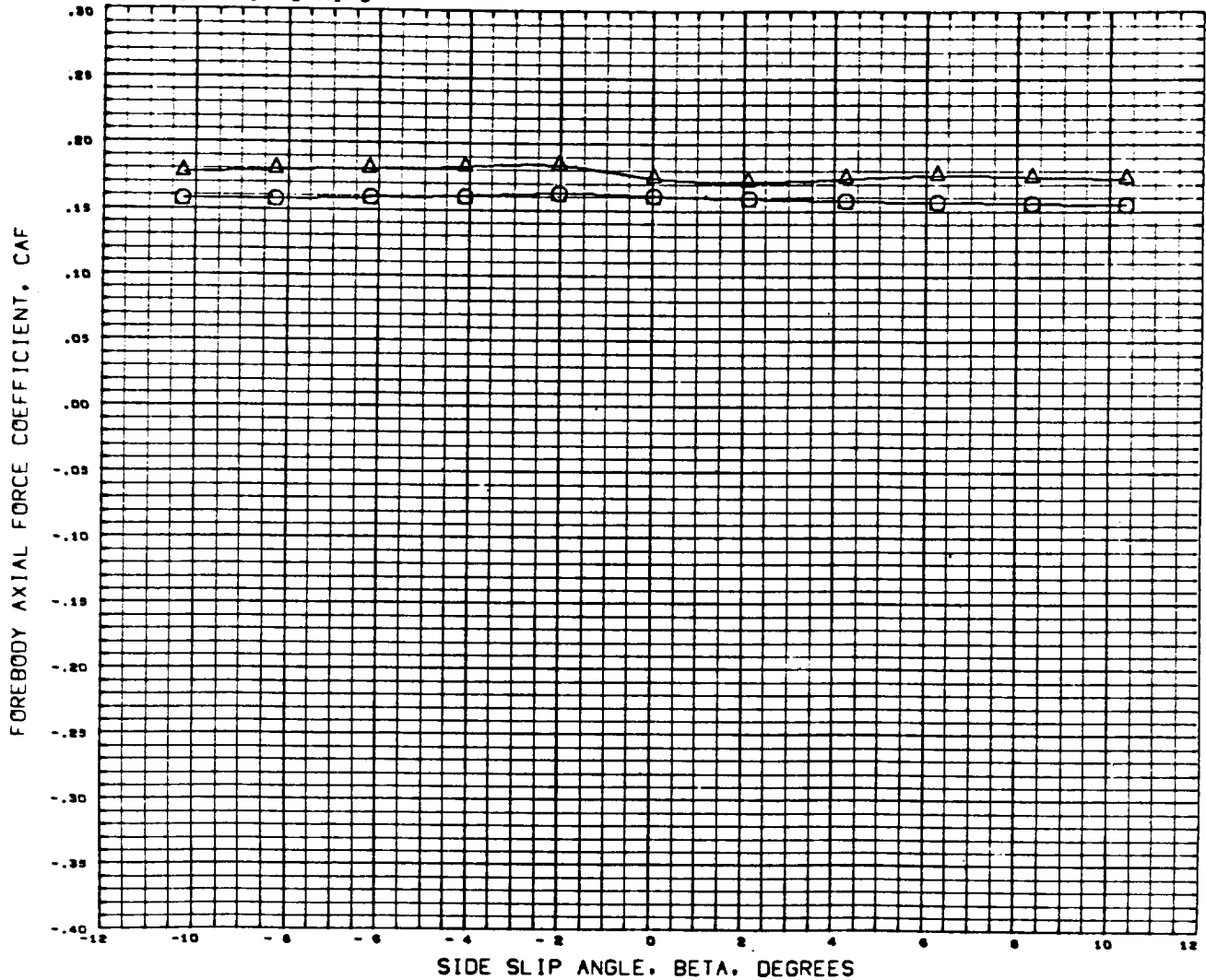
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(230197)	M496-HSPC AR11981-3 MODEL W6B2C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225 IN.
(630191)	M496-HSPC AR11981-3 MODEL W6B2C12V2	30.000	-40.000	0.000	0.000	LREF	1.3360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 3.480

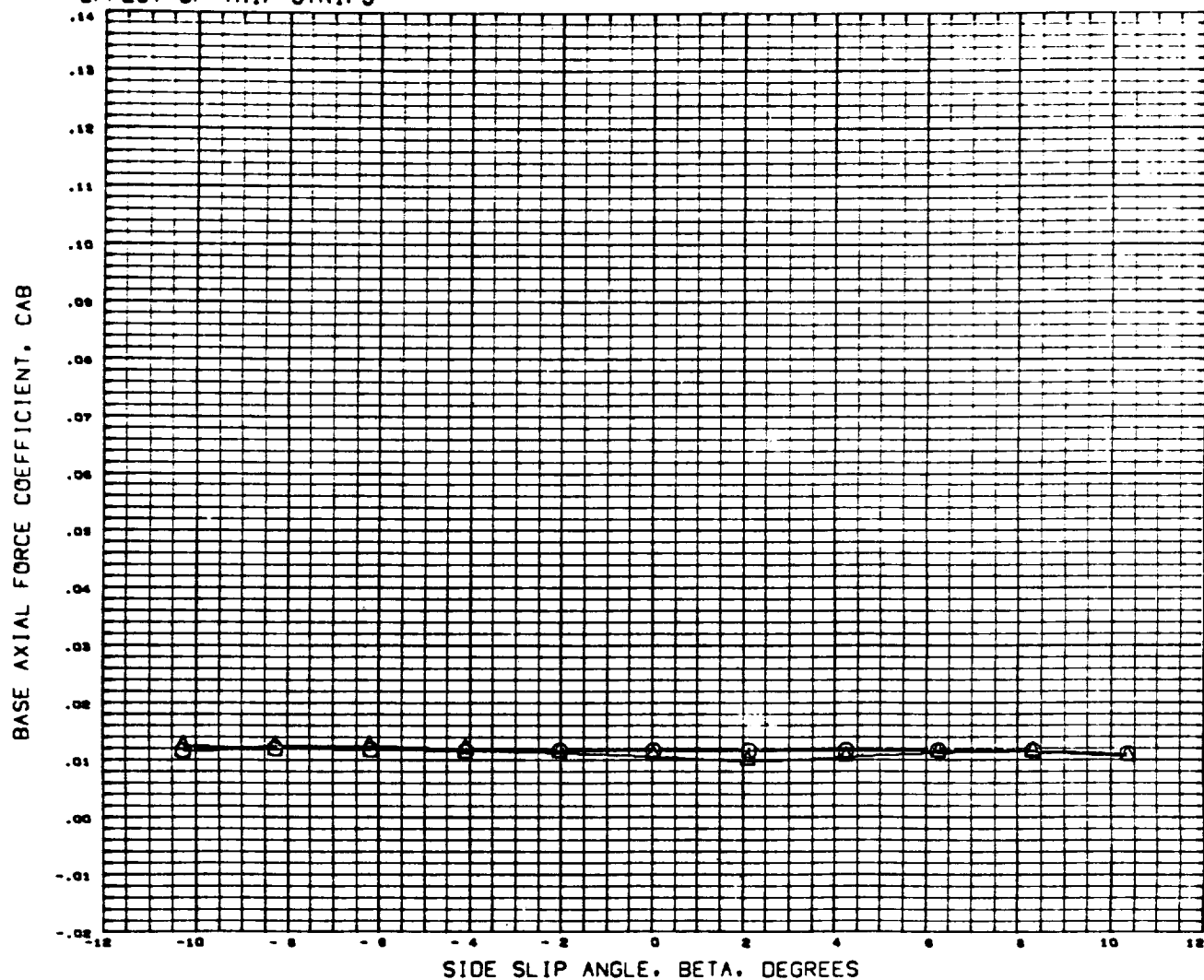
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(Z39197)	M496-MSFC AR11981-3 MODEL W6B2C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225 30. IN.
(639191)	M496-MSFC AR11981-3 MODEL W6B2C12V2	30.000	-40.000	0.000	0.000	LREF	1.3360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 3.480

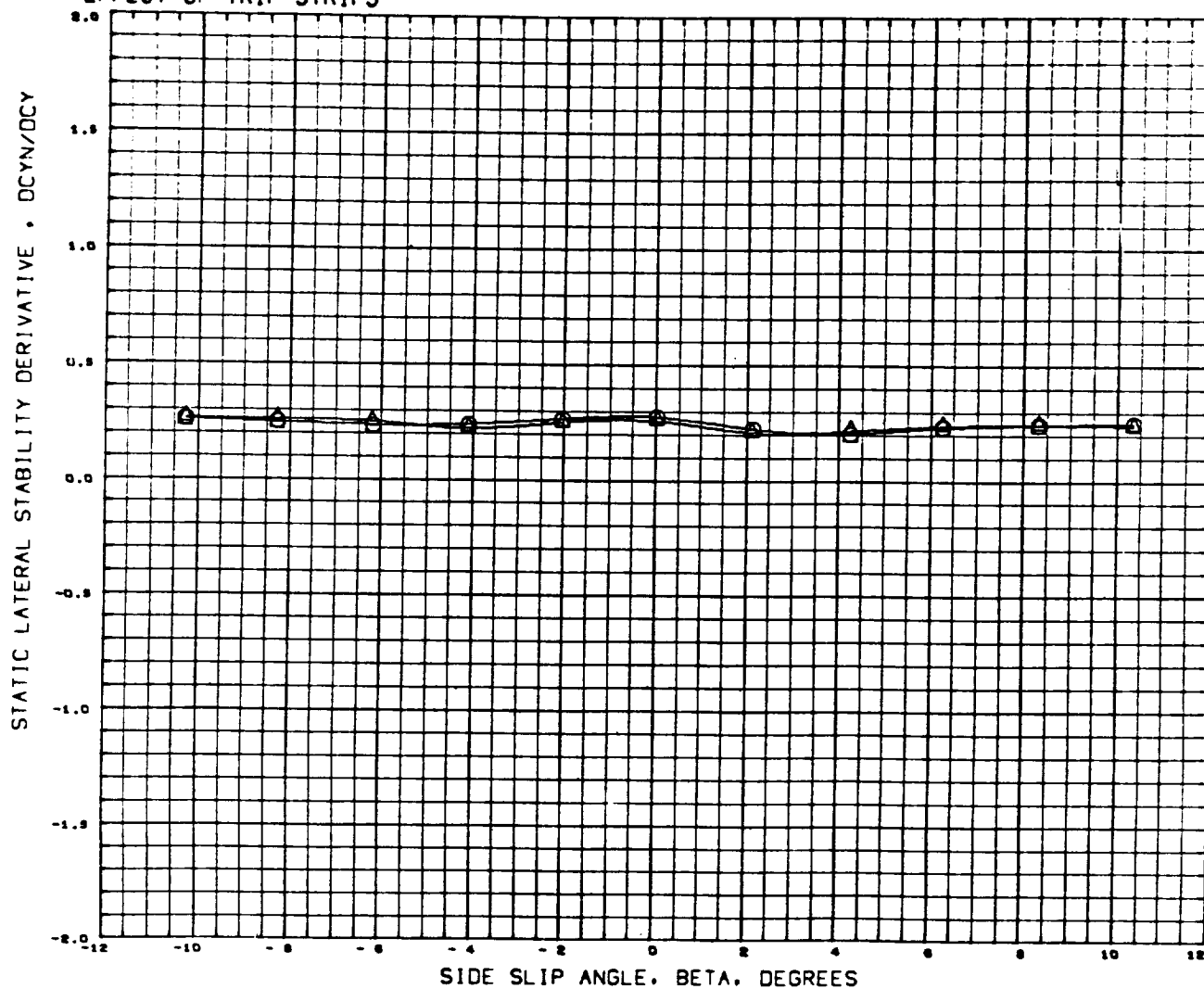
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(238197)	M496-MSFC AR11981-3 MODEL W682C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225 33. IN.
(638191)	M496-MSFC AR11981-3 MODEL W682C12V2	30.000	-40.000	0.000	0.000	LREF	1.5360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 3.480

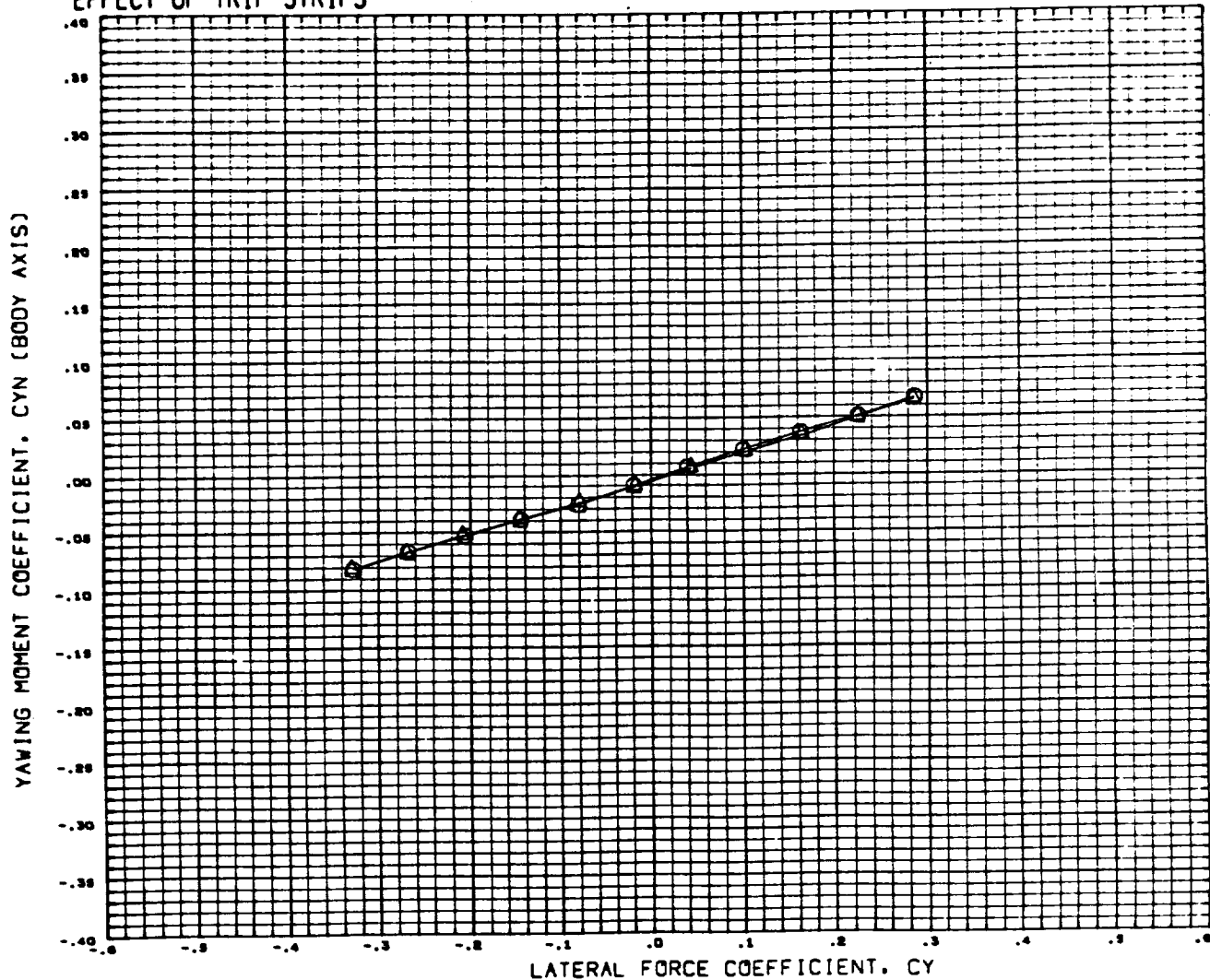
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(238197)	M496-MSPC AR11981-3 MODEL W682C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6225 SQ. IN.
(638191)	M496-MSPC AR11981-3 MODEL W682C12V2	30.000	-40.000	0.000	0.000	LREF	1.9360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 3.480

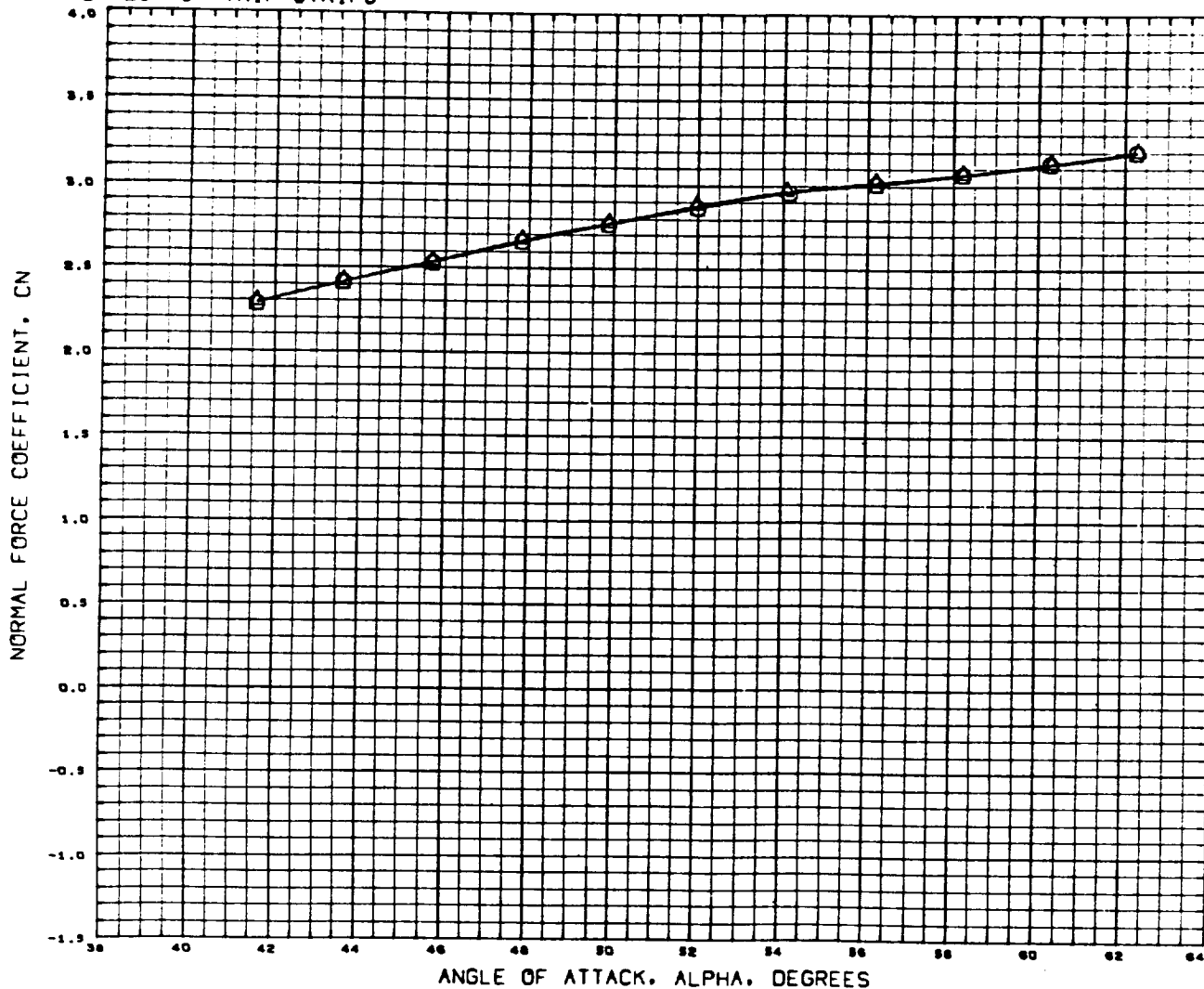
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	CANARD	ELEVTR	AILRON	REFERENCE INFORMATION	
(230197)	M496-HSFC AR11981-3 MODEL W882C12V2, NO TRIP STRP	30.000	-40.000	0.000	0.000	SREF	4.6223 SQ. IN.
(630191)	M496-HSFC AR11981-3 MODEL W882C12V2	30.000	-40.000	0.000	0.000	LREF	1.5360 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0023

MACH 3.400

EFFECT OF TRIP STRIPS



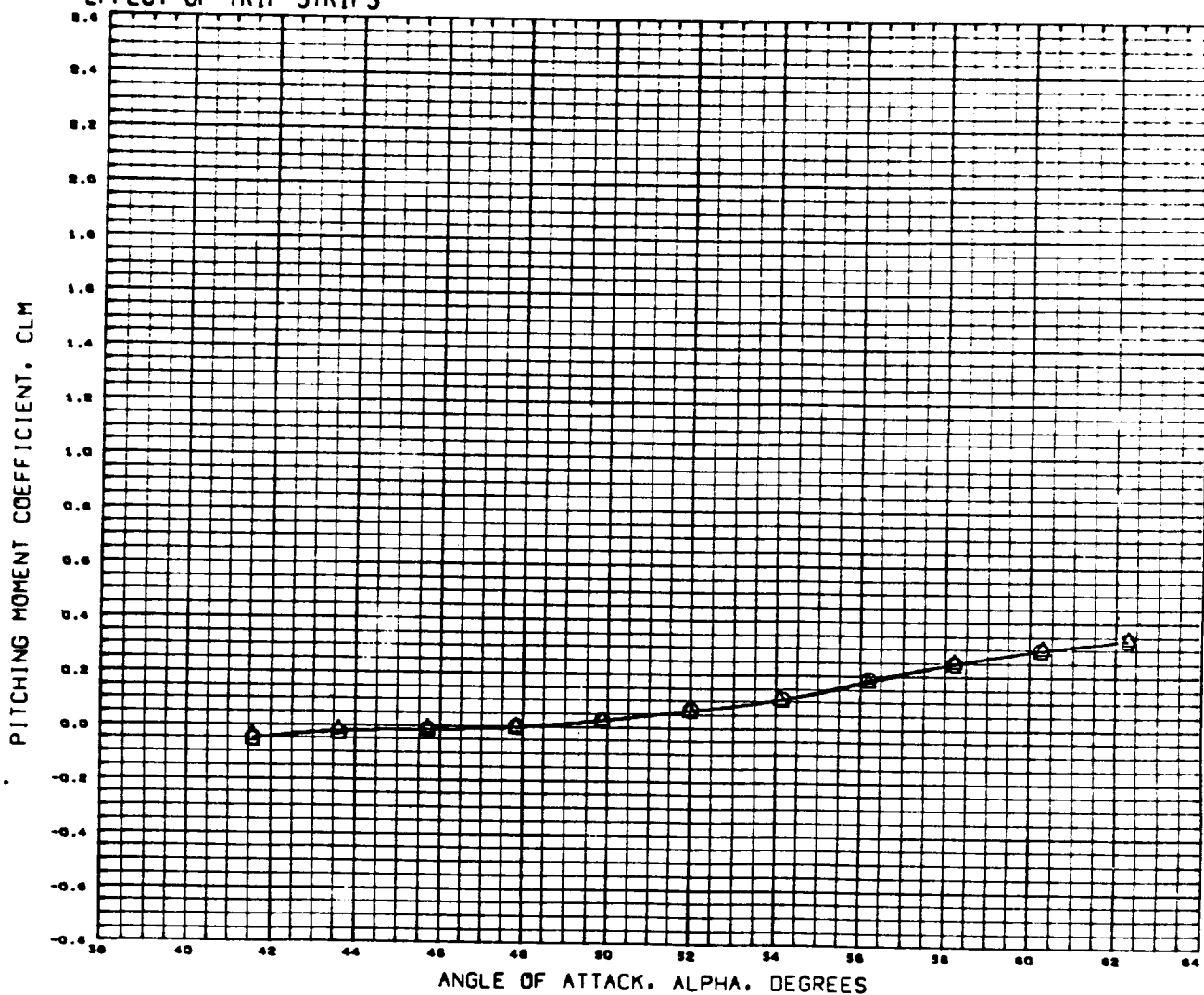
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (Z3409U) M496-MSFC AR119R1-3 MODEL W8B2V2 ,NO. 54 GRIT
 (G3809K) M496-MSFC AR119R1-3 MODEL W8B2V2

BETA ELEVTR
 0.000 0.000
 0.000 0.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.3360 IN.
 QREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

MACH 1.942

EFFECT OF TRIP STRIPS



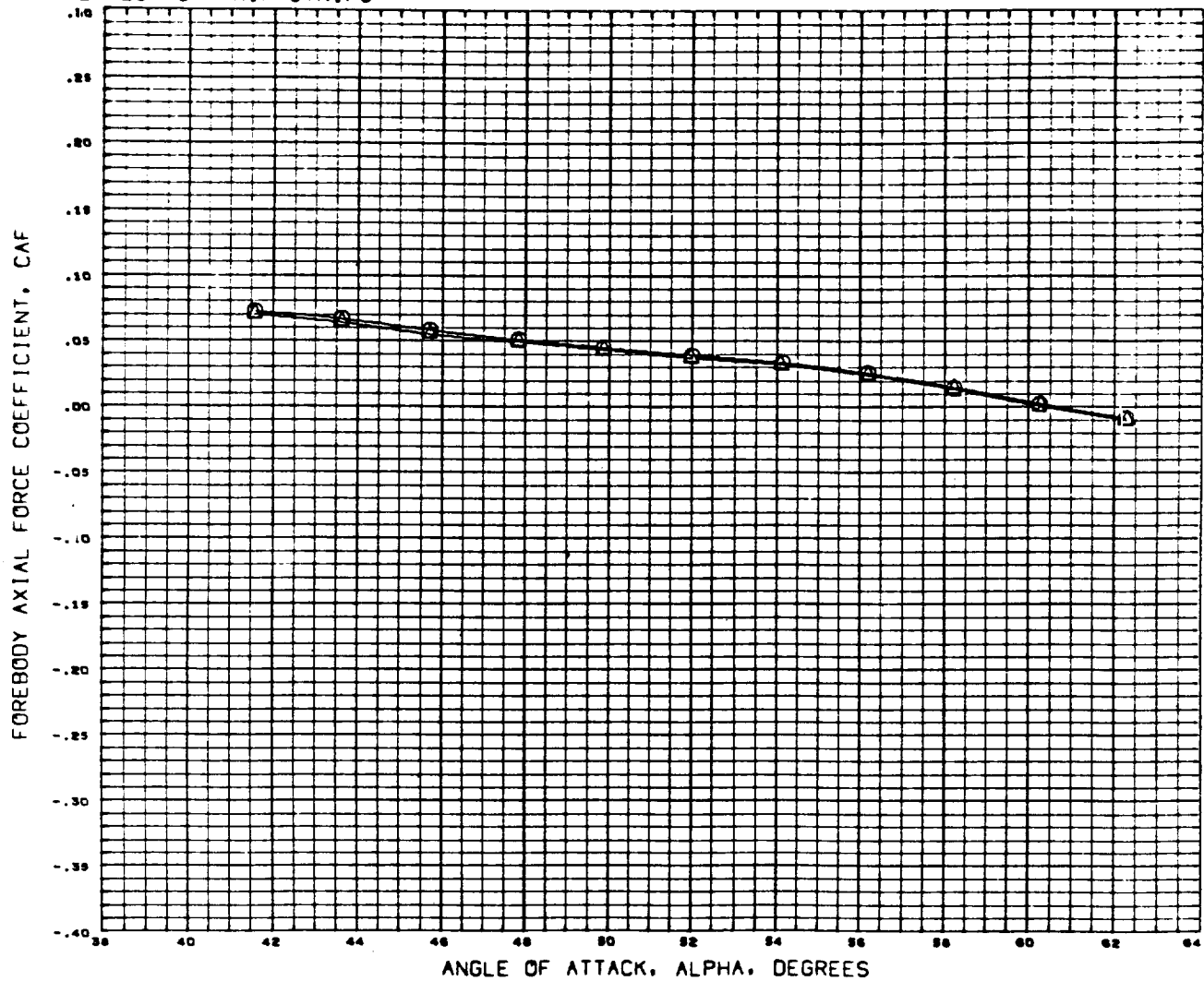
DATA SET SYMBOL (23809U) (63909K) CONFIGURATION DESCRIPTION M496-M5FC AR11981-3 MODEL W882V2 , NO. 34 GRIT M496-M5FC AR11981-3 MODEL W882V2

BETA 0.000 0.000
ELEVTR 0.000 0.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

MACH 1.942

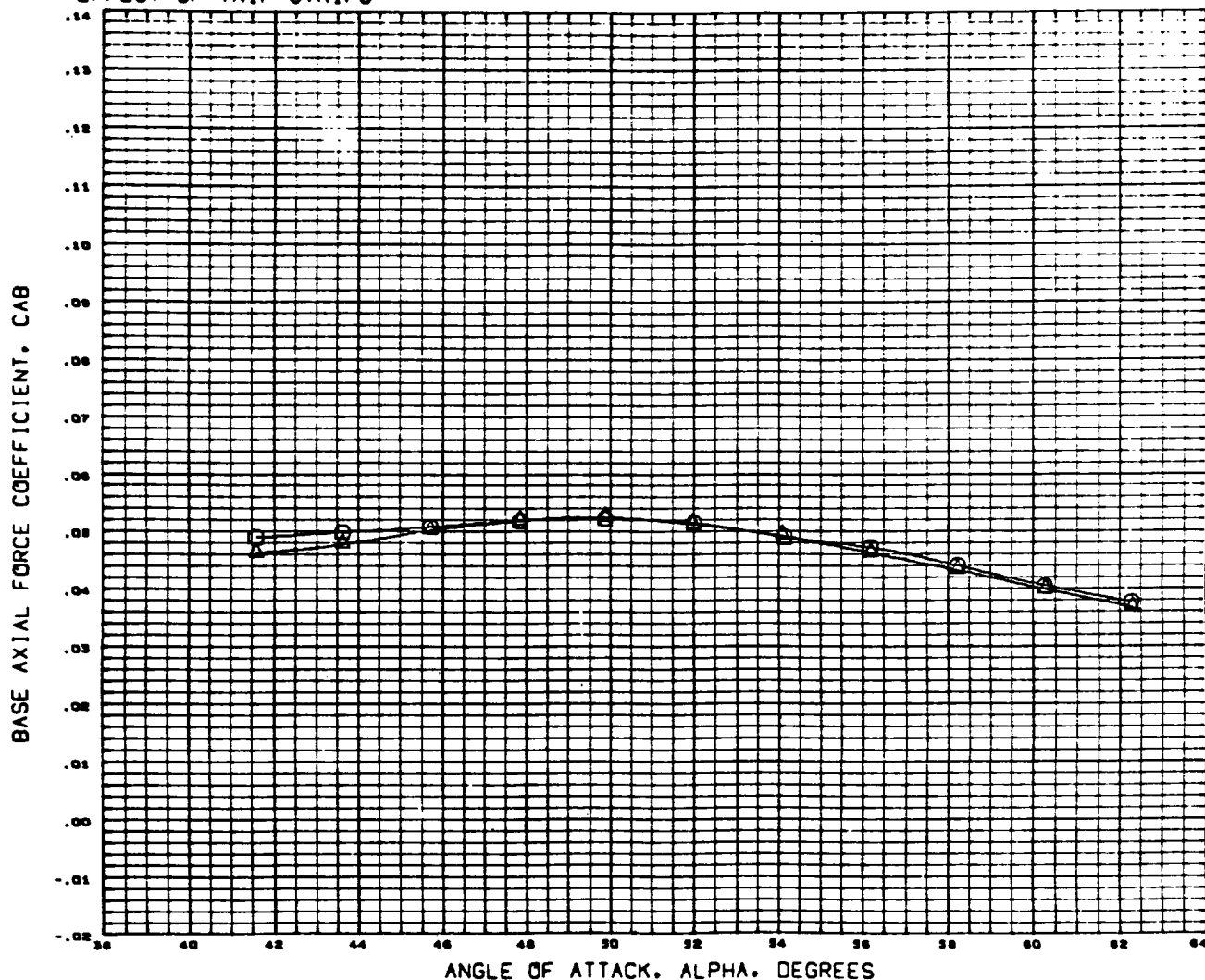
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	REFERENCE INFORMATION
(Z3409U)	M496-MSFC AR11981-3 MODEL W682V2 ,NO. 54 GRIT	0.000	0.000	SREF 4.6225 SQ. IN.
(G3809K)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	LREF 1.5360 IN.
				BREF 4.3000 IN.
				XMRP 2.4000 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0025

MACH 1.942

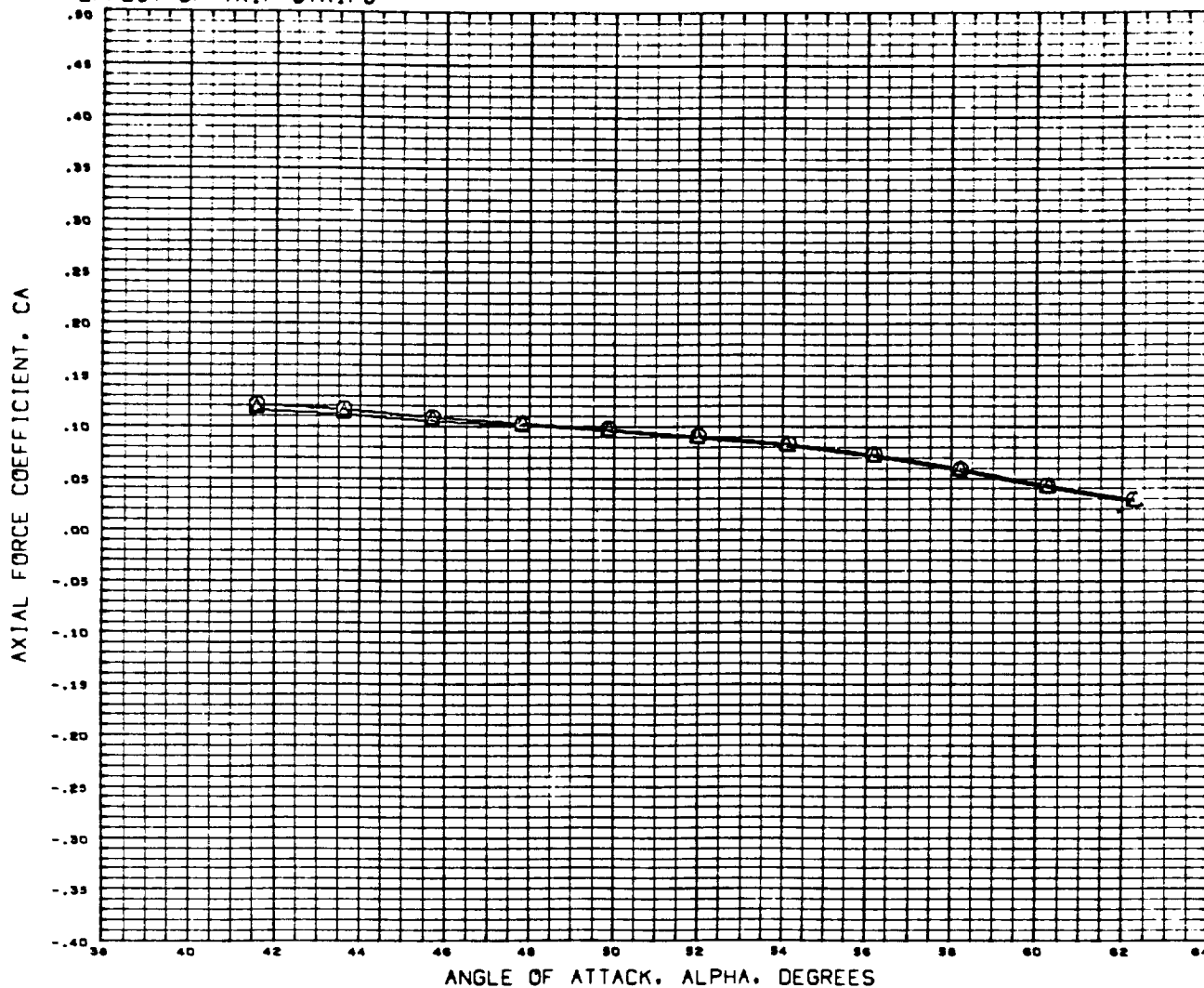
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	REFERENCE INFORMATION
(23809U)	M496-M3FC AR11981-3 MODEL W682V2 ,NO. 54 GRIT	0.000	0.000	SREF 4.6223 30. IN.
(63909K)	M496-M3FC AR11981-3 MODEL W682V2	0.000	0.000	LREF 1.5360 IN.
				BREF 4.3000 IN.
				XMRP 2.4000 IN.
				YMRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0025

MACH 1.942

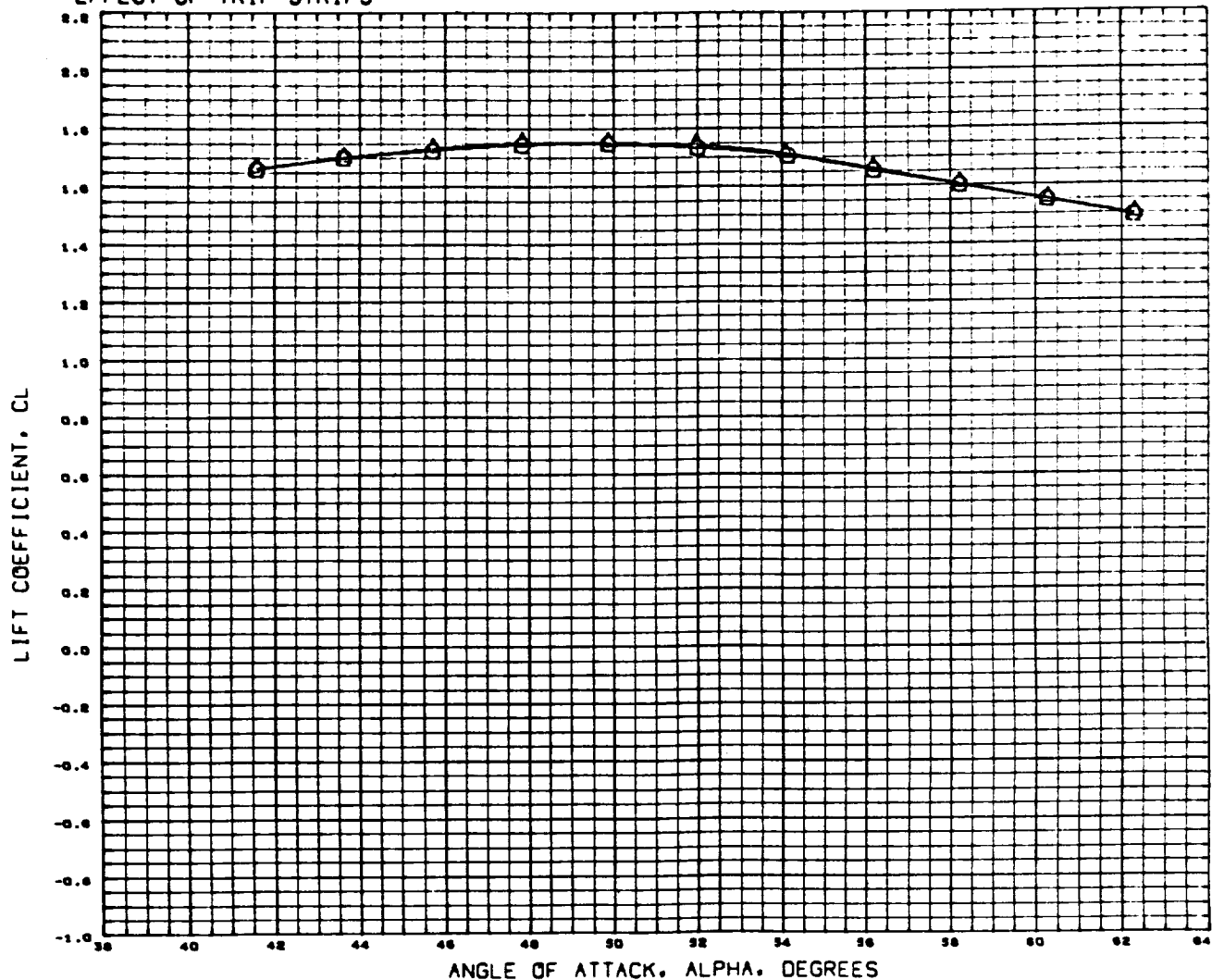
EFFECT OF TRIP STRIPS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	REFERENCE INFORMATION	
(Z3R09U)	M496-MSFC AR11981-3 MODEL W6B2V2 ,NO. 34 GRIT	0.000	0.000	SREF	4.6225 50.1N.
(G3B09K)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	0.000	LREF	1.5360 1N.
				BREF	4.3000 1N.
				XMRP	2.4000 1N.
				YMRP	0.0000 1N.
				ZMRP	0.0000 1N.
				SCALE	0.0025

MACH 1.942

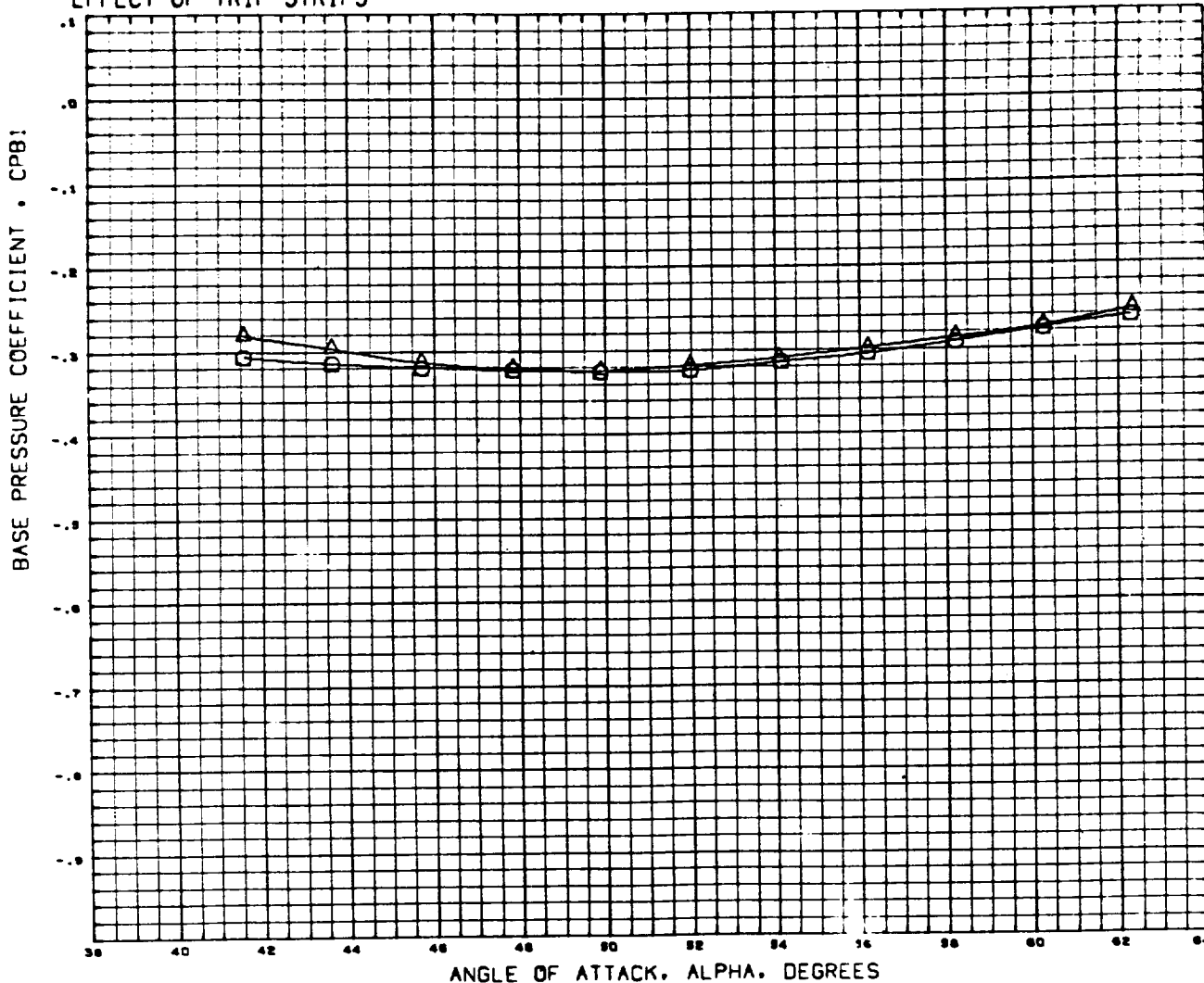
EFFECT OF TRIP STRIPS



DATA SET SYMBOL		CONFIGURATION DESCRIPTION	BETA	ELEVTR	REFERENCE INFORMATION	
(23808U)	Q	M498-MSFC AR11981-3 MODEL W682V2 ,NO. 34 GRIT	0.000	0.000	SREF	4.6225 SQ.IN.
(63808K)	A	M498-MSFC AR11981-3 MODEL W682V2	0.000	0.000	LREF	1.3360 IN.
					BREF	4.3000 IN.
					XMRP	2.4000 IN.
					YMRP	0.0000 IN.
					ZMRP	0.0000 IN.
					SCALE	0.0025

MACH 1.942

EFFECT OF TRIP STRIPS



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (23809U) M496-MSFC AR11961-3 MODEL W8B2V2 ,NO. 34 GRIT
 (63809K) M496-MSFC AR11961-3 MODEL W8B2V2

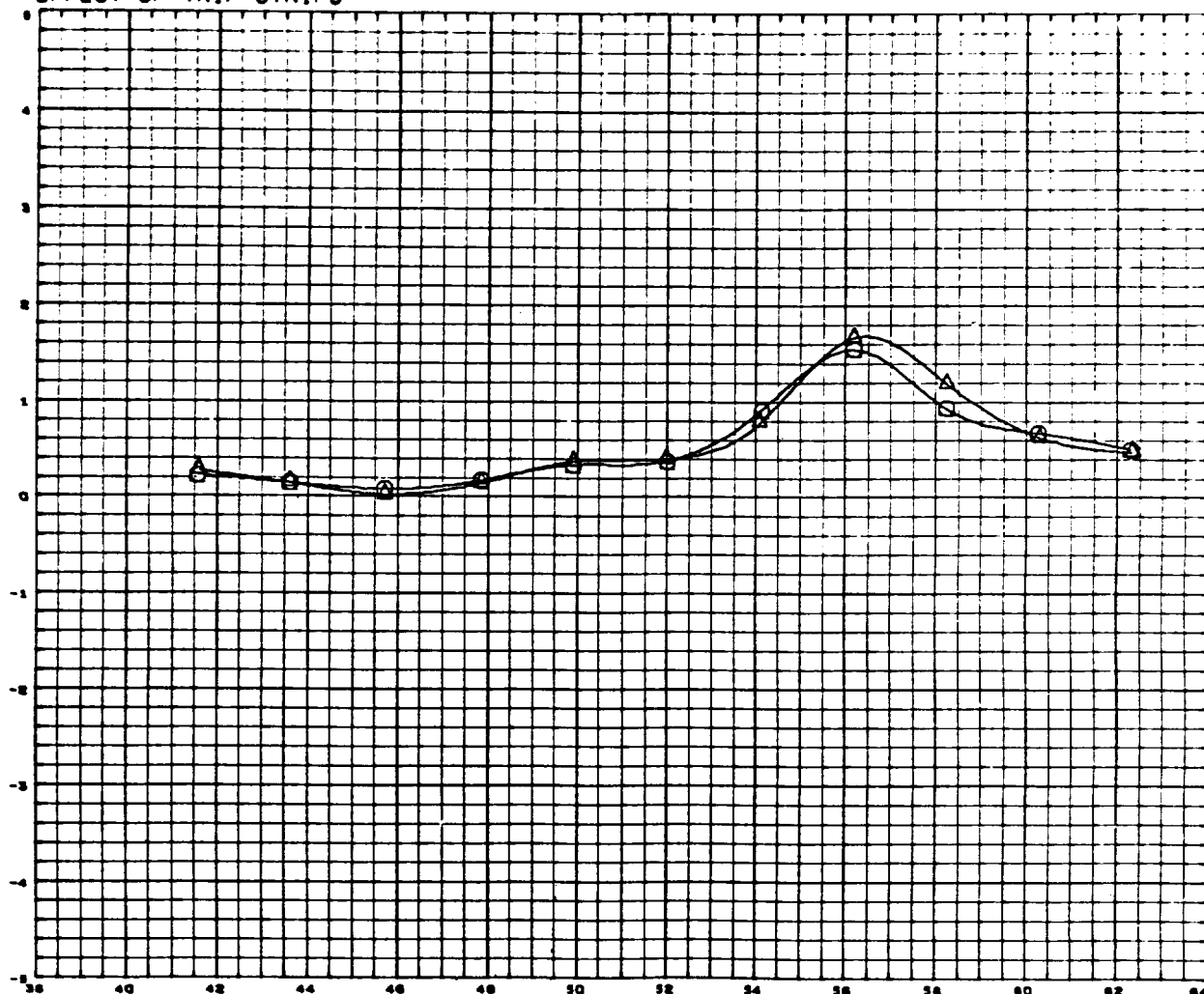
BETA ELEVTR
 0.000 0.000
 0.000 0.000

REFERENCE INFORMATION
 SREF 4.6225 89.1N.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 ZMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 1.942

EFFECT OF TRIP STRIPS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN



ANGLE OF ATTACK, ALPHA, DEGREES

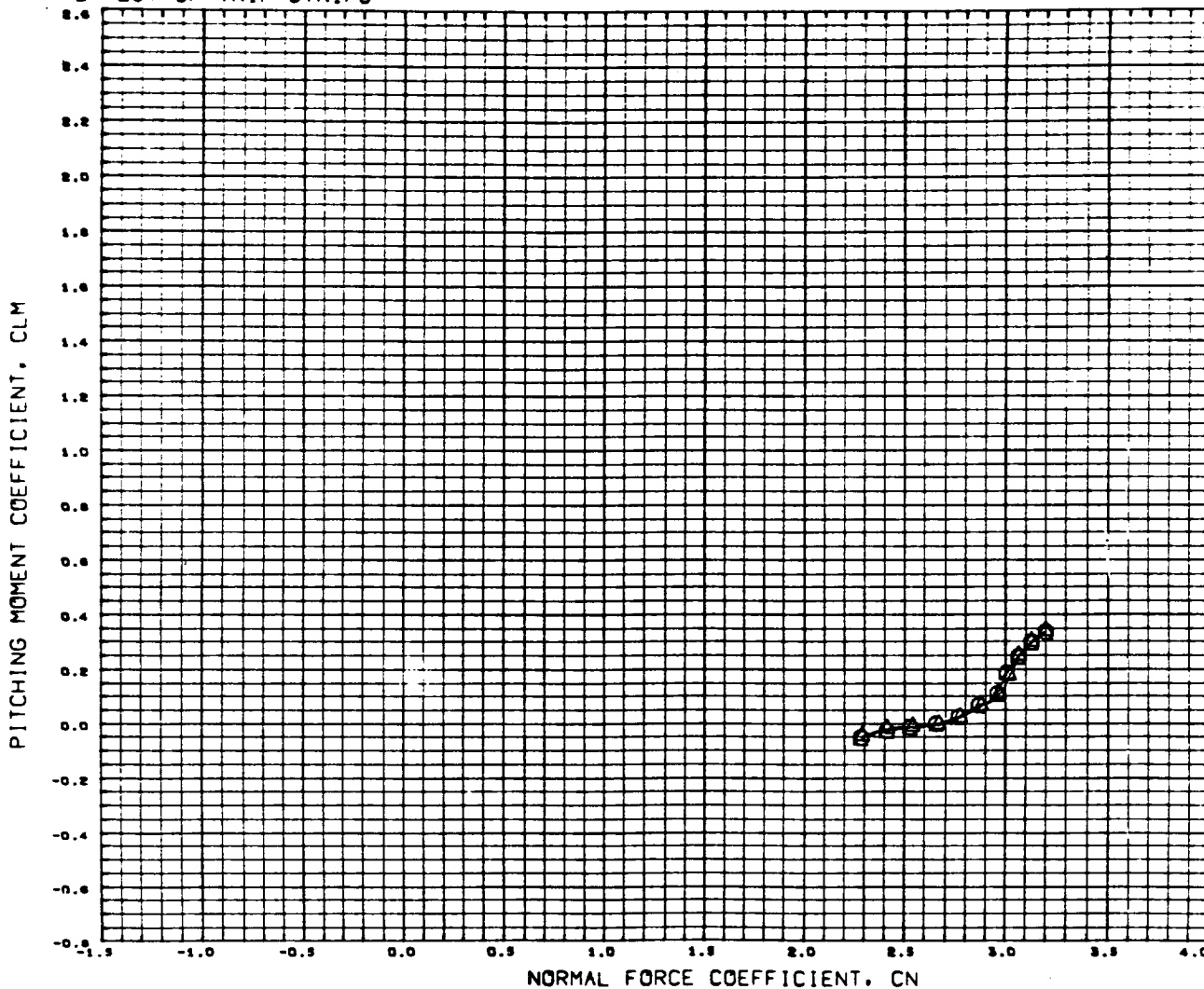
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (23809U) M496-MSFC AR11981-3 MODEL W882V2 ,NO. 54 GRIT
 (63809K) M496-MSFC AR11981-3 MODEL W882V2

BETA ELEVTR
 0.000 0.000
 0.000 0.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.9380 IN.
 BREF 4.3000 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0029

MACH 1.942

EFFECT OF TRIP STRIPS



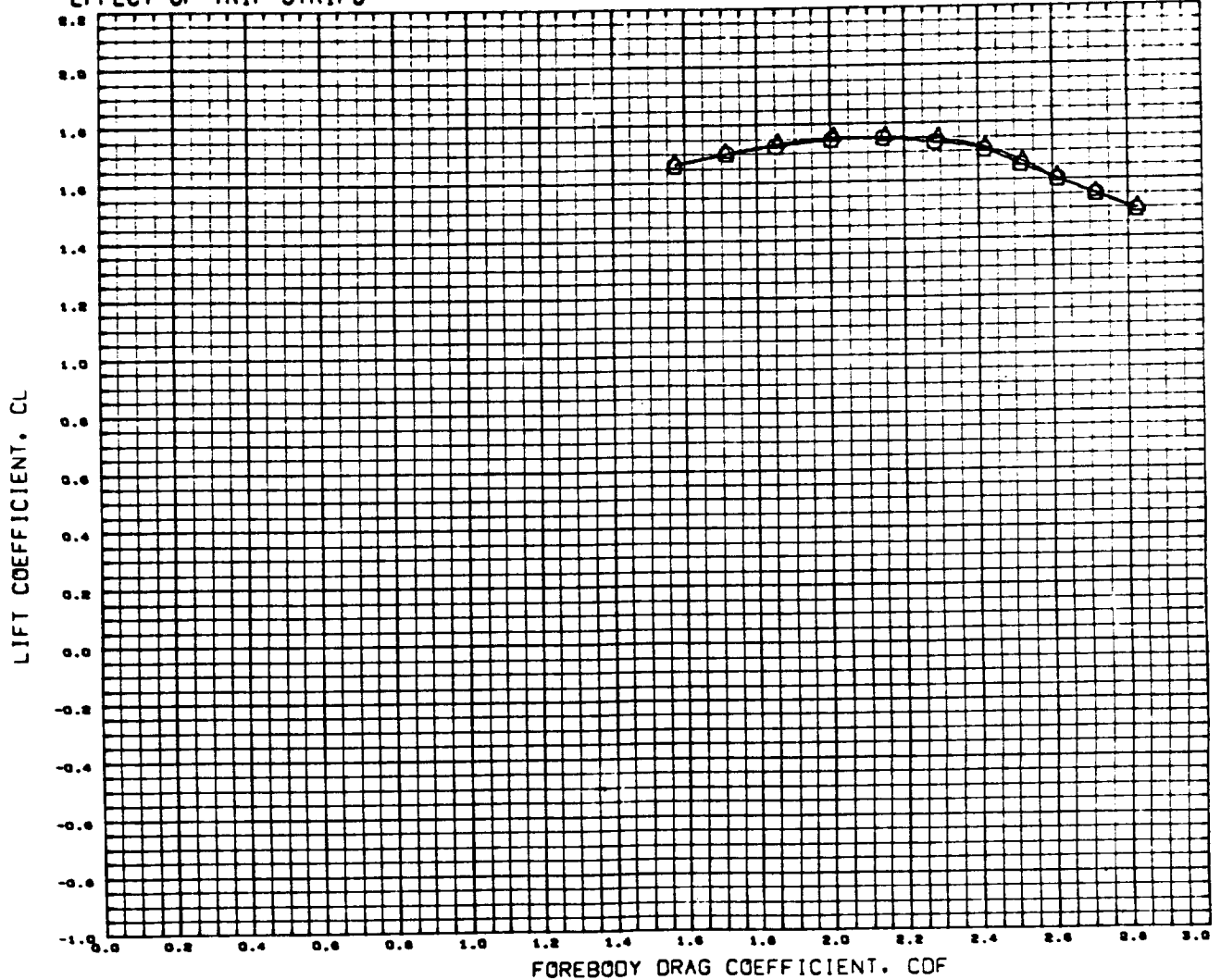
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (23809U) M496-MSFC AR11981-3 MODEL W8B2V2 ,NO. 34 GRIT
 (63909K) M496-MSFC AR11981-3 MODEL W8B2V2

BETA ELEVTR
 0.000 0.000
 0.000 0.000

REFERENCE INFORMATION
 SREF 4.6225 80. IN.
 LREF 1.5560 IN.
 OREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 1.942

EFFECT OF TRIP STRIPS



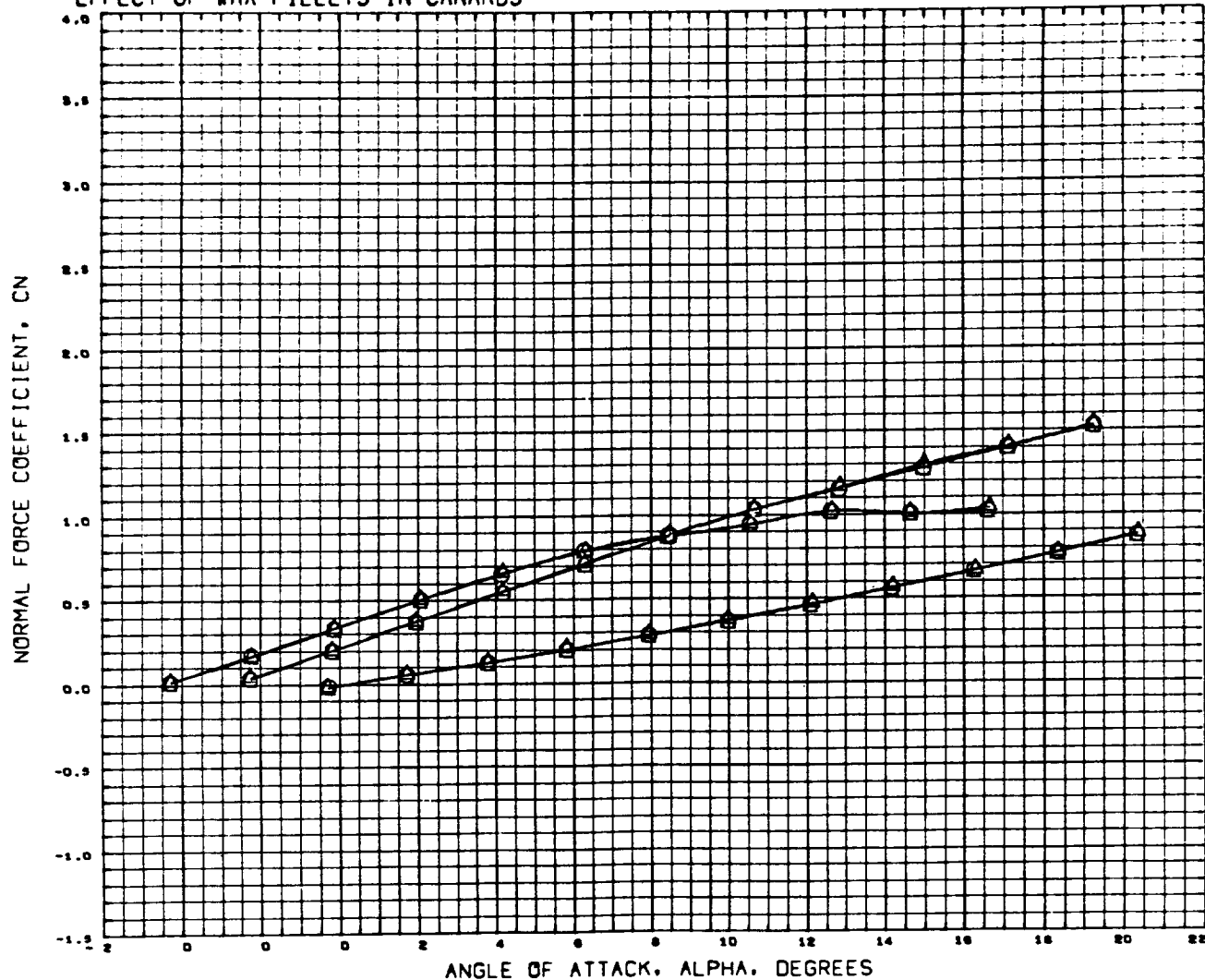
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (23809U) M496-M5FC AR11981-3 MODEL W6B2V2 ,NO. 54 GRIT
 (63809K) M496-M5FC AR11981-3 MODEL W6B2V2

BETA ELEVTR
 0.000 0.000
 0.000 0.000

REFERENCE INFORMATION
 SREF 4.6225 50. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 1.942

EFFECT OF WAX FILLETS IN CANARDS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3817A) M496-MSFC AR11961-3 MODEL W6B2C12V2 BETA 0.000 ELEVTR 0.000 CANARD 0.000

(Z38175)

WAX FILLETS

M496-MSFC AR11961-3 MODEL W6B2C12V2, WAX FAIRINGS

BETA 0.000 ELEVTR 0.000 CANARD 0.000

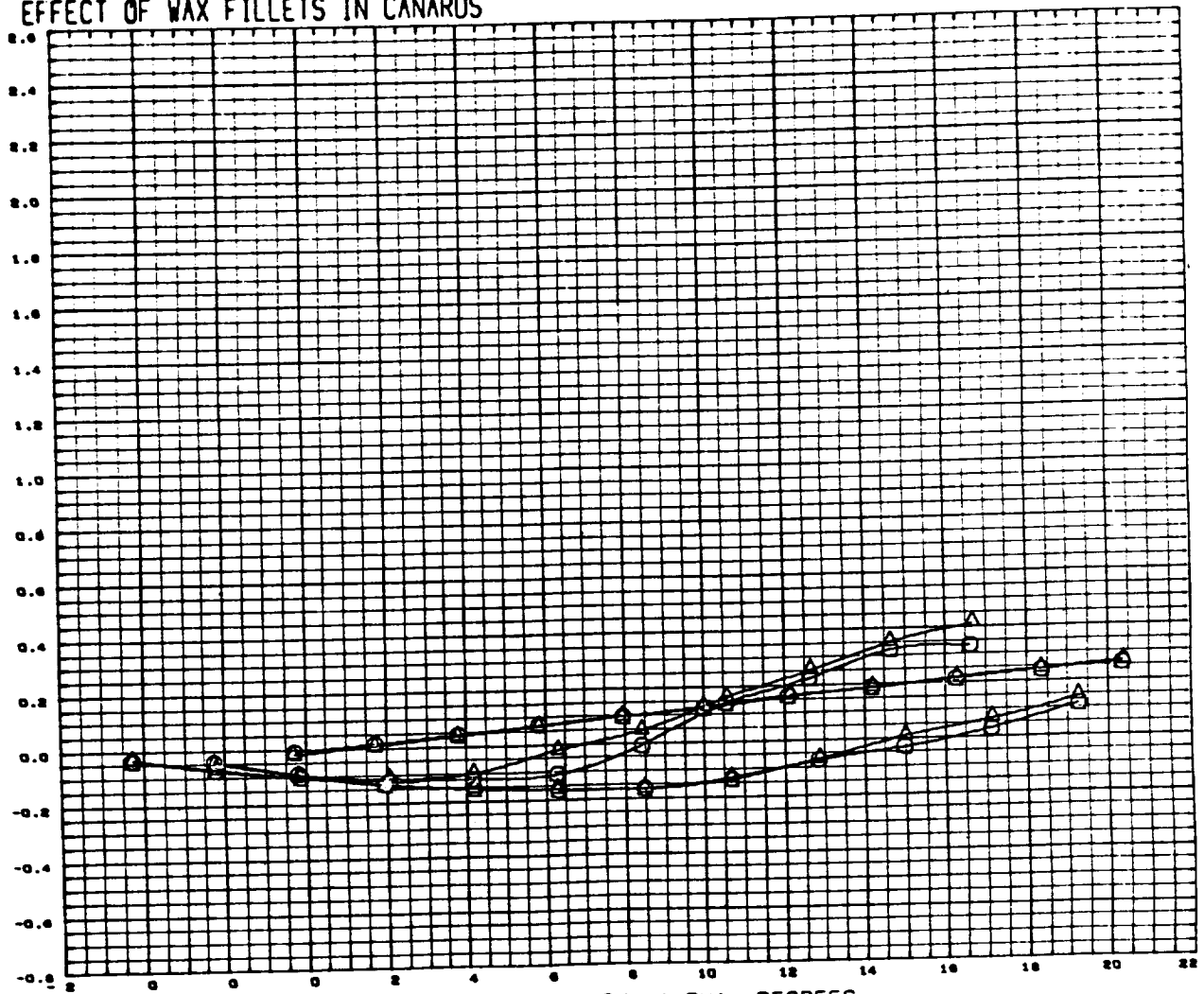
REFERENCE INFORMATION

SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

MACH 0.598 1.197 3.480

EFFECT OF WAX FILLETS IN CANARDS

PITCHING MOMENT COEFFICIENT, CLM



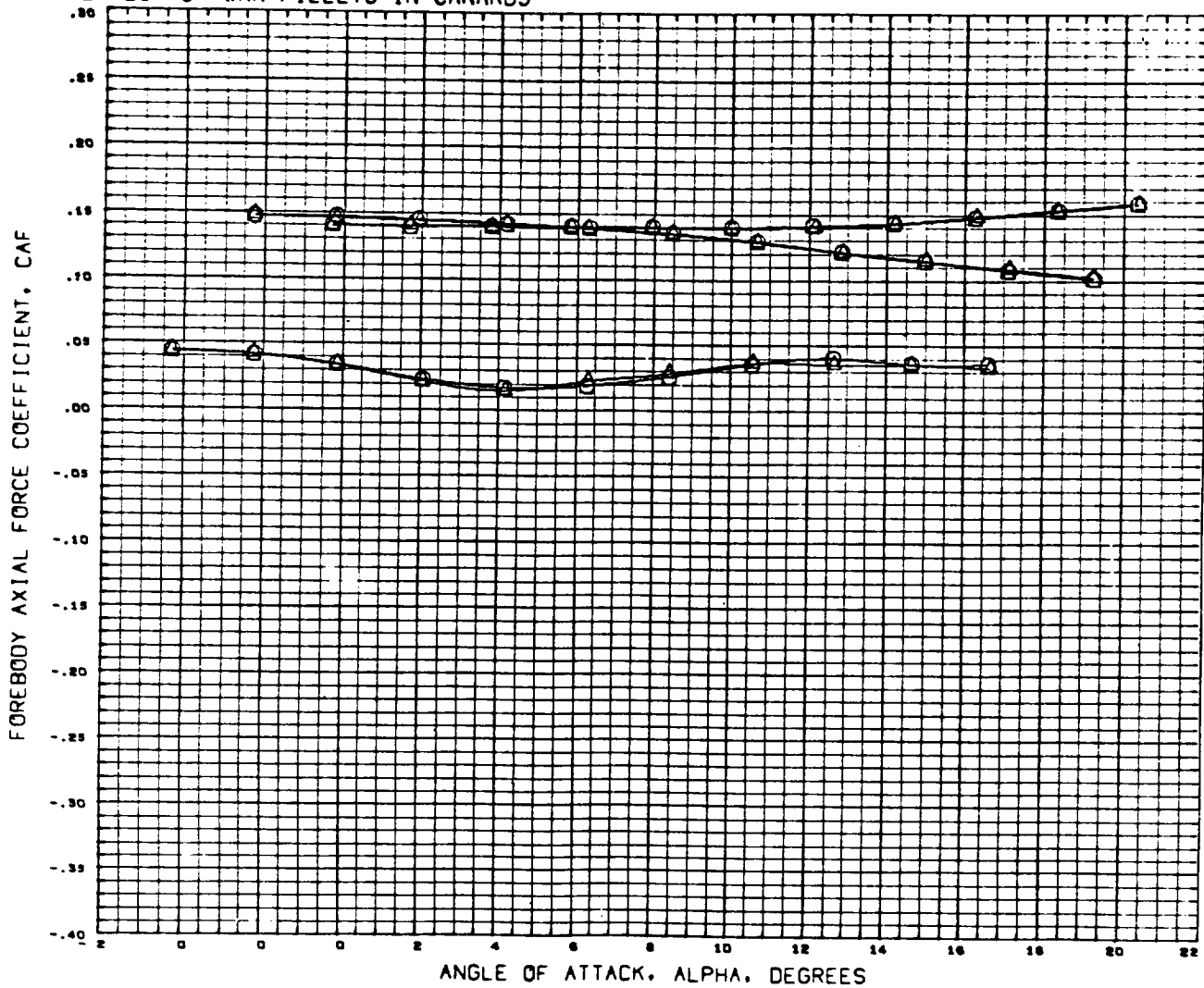
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3817A) ○	M496-MSFC AR11961-3 MODEL W62C12V2
(Z38173) △	M496-MSFC AR11961-3 MODEL W62C12V2, WAX FAIRINGS

BETA	ELEVTR	CANARD
0.000	0.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

MACH	0.396	1.197	3.480
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EFFECT OF WAX FILLETS IN CANARDS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

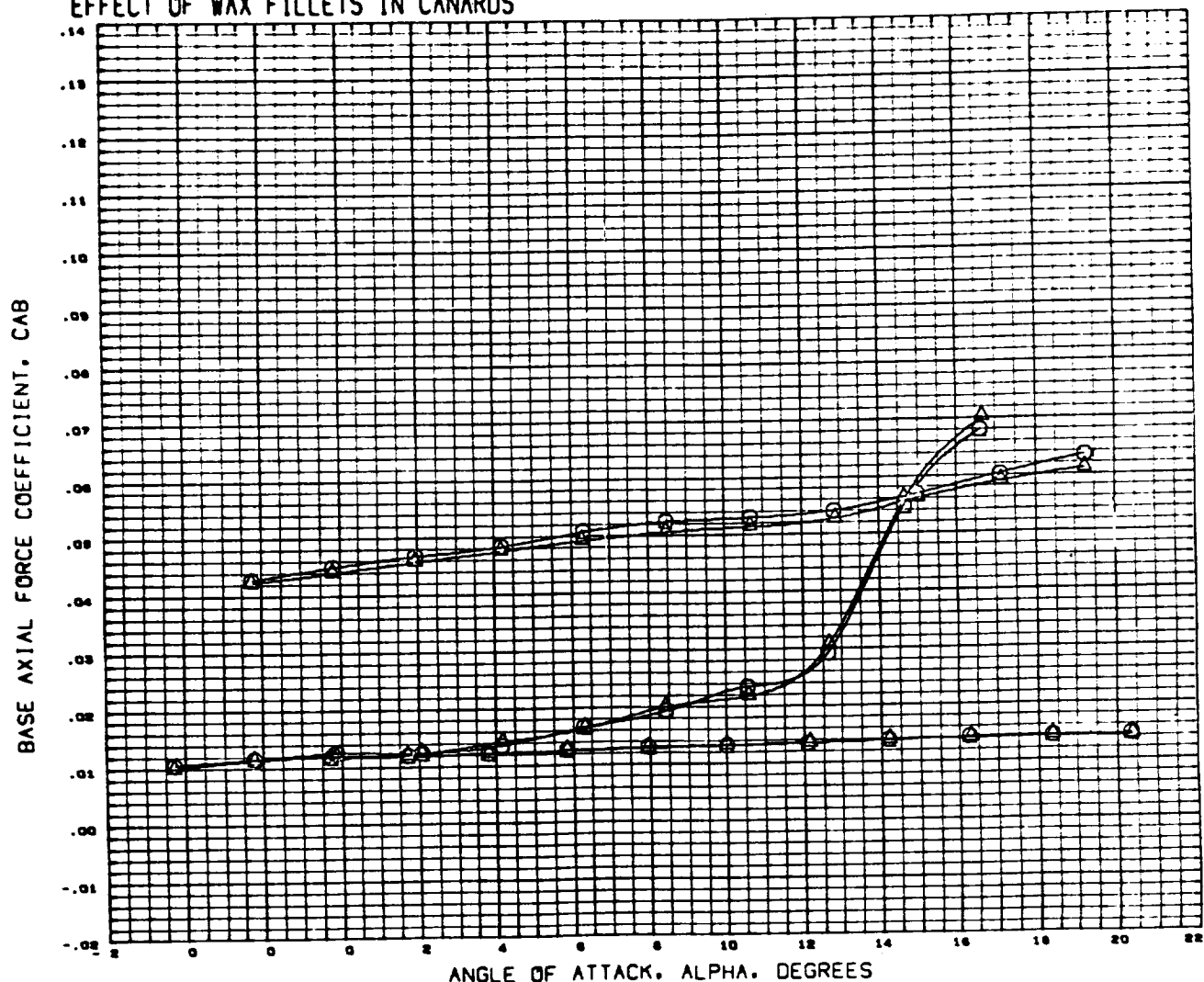
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD
(E3617A)	M496-MSFC AR11961-3 MODEL W6B2C12V2	0.000	0.000	0.000
(Z3617S)	M496-MSFC AR11961-3 MODEL W6B2C12V2, WAX FILLETS	0.000	0.000	0.000

REFERENCE INFORMATION

SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

MACH 0.998 1.197 3.480

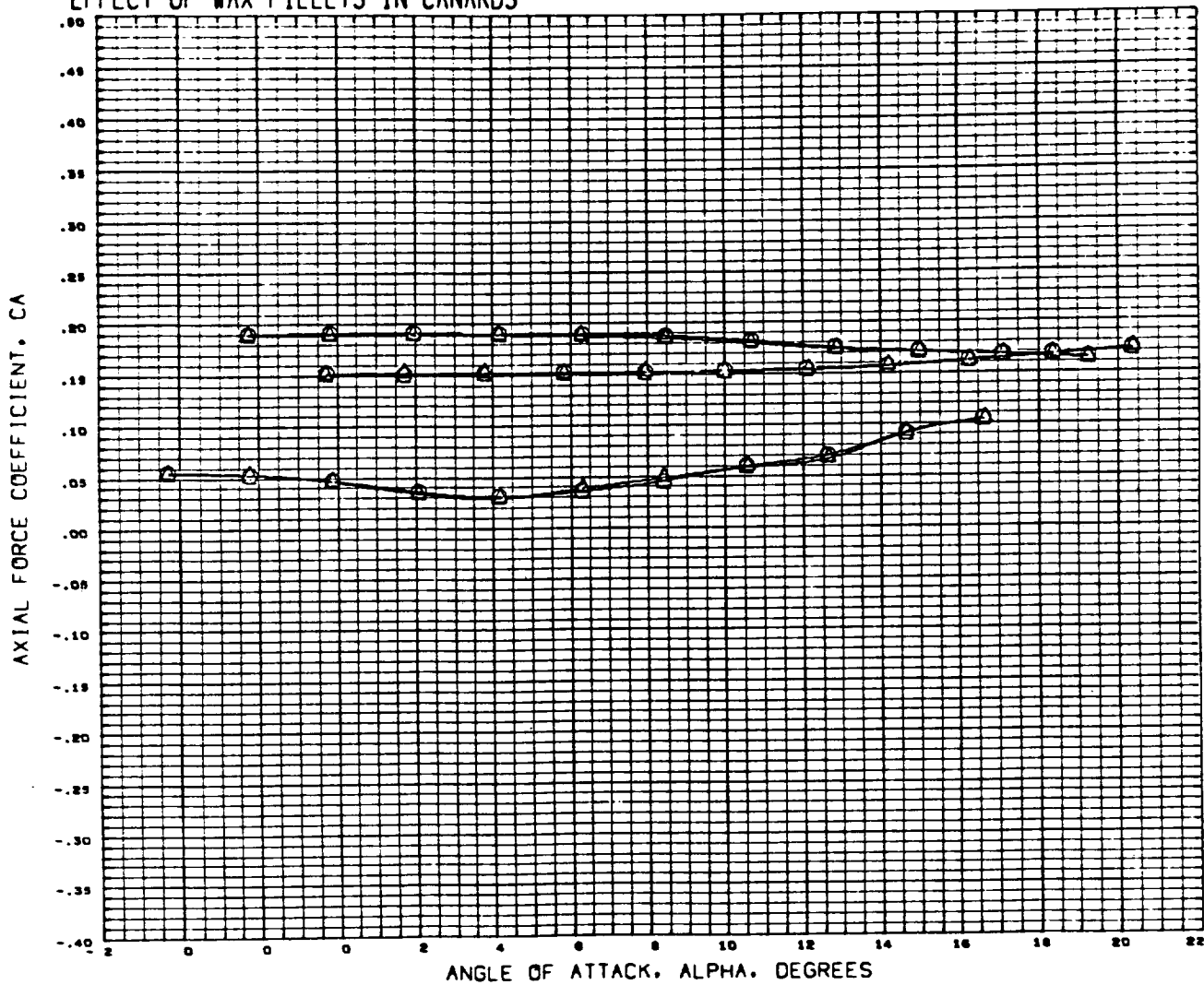
EFFECT OF WAX FILLETS IN CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD	REFERENCE INFORMATION
(E3017A)	M496-MSFC AR11901-3 MODEL W6B2C12V2	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(Z3017B)	M496-MSFC AR11901-3 MODEL W6B2C12V2, WAX FAIRINGS	0.000	0.000	0.000	LREF 1.5340 IN.
					BREF 4.3000 IN.
					YNRP 2.4000 IN.
					YNRP 0.0000 IN.
					ZNRP 0.0000 IN.
					SCALE 0.0025

MACH 0.590 1.197 3.460

EFFECT OF WAX FILLETS IN CANARDS

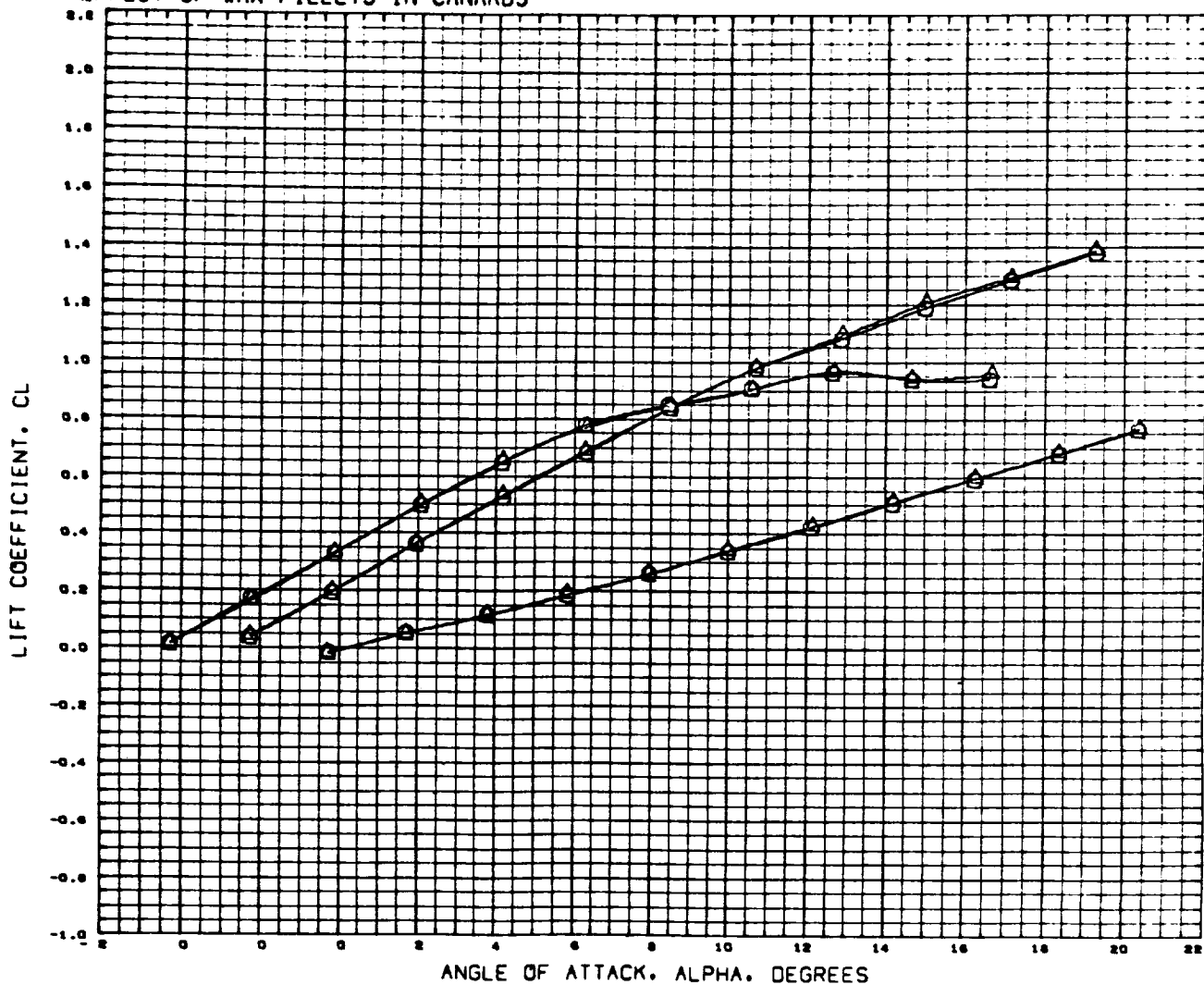


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD
(E39174)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000
(Z39175)	M496-MSFC AR11981-3 MODEL W6B2C12V2, WAX FAIRINGS	0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XHRP	2.4000 IN.
YHRP	0.0000 IN.
ZHRP	0.0000 IN.
SCALE	0.0025

MACH	0.598	1.197	3.480
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EFFECT OF WAX FILLETS IN CANARDS

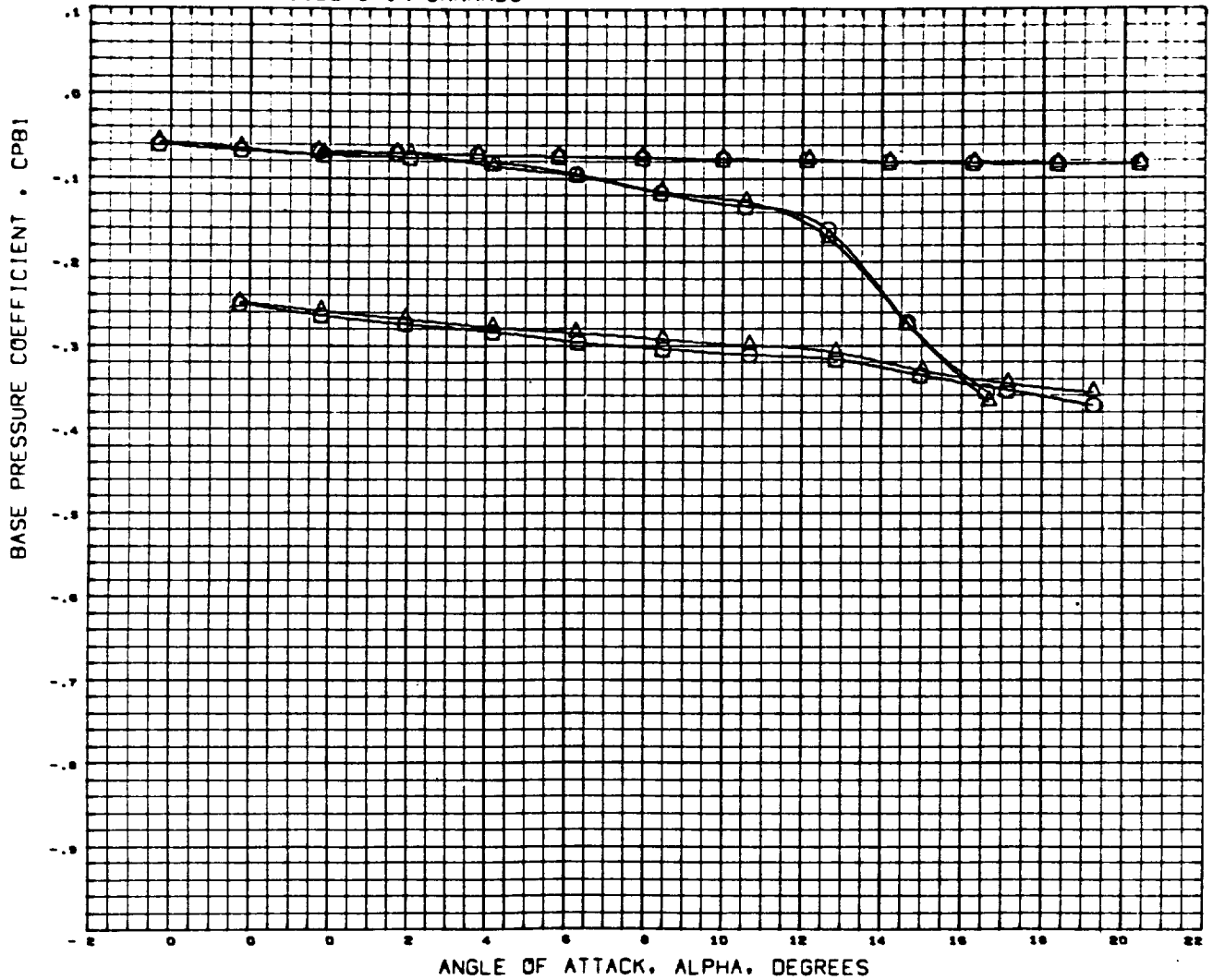


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD
(E3817A)	M496-NSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000
(Z38175)	M496-NSFC AR11981-3 MODEL W682C12V2, WAX PAIRINGS	0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
CREF	1.5360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH	0.598	1.197	3.480
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EFFECT OF WAX FILLETS IN CANARDS

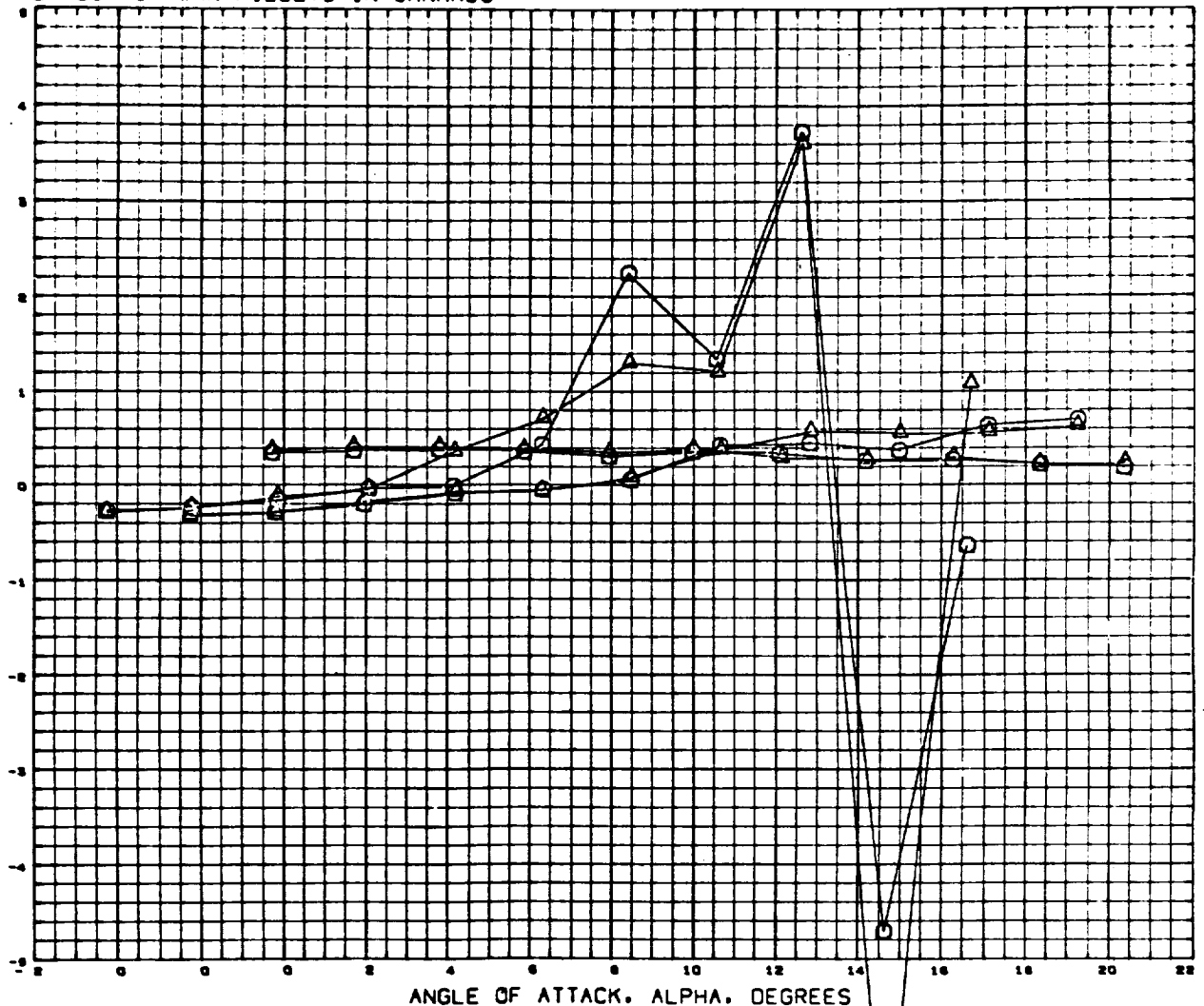


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD	REFERENCE INFORMATION
(E3017A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(Z30175)	M496-MSFC AR11981-3 MODEL W6B2C12V2, WAX FAIRINGS	0.000	0.000	0.000	LREF 1.9360 IN.
					SREF 4.3000 IN.
					XMRP 2.4000 IN.
					YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 0.998 1.197 3.480

EFFECT OF WAX FILLETS IN CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/QCN

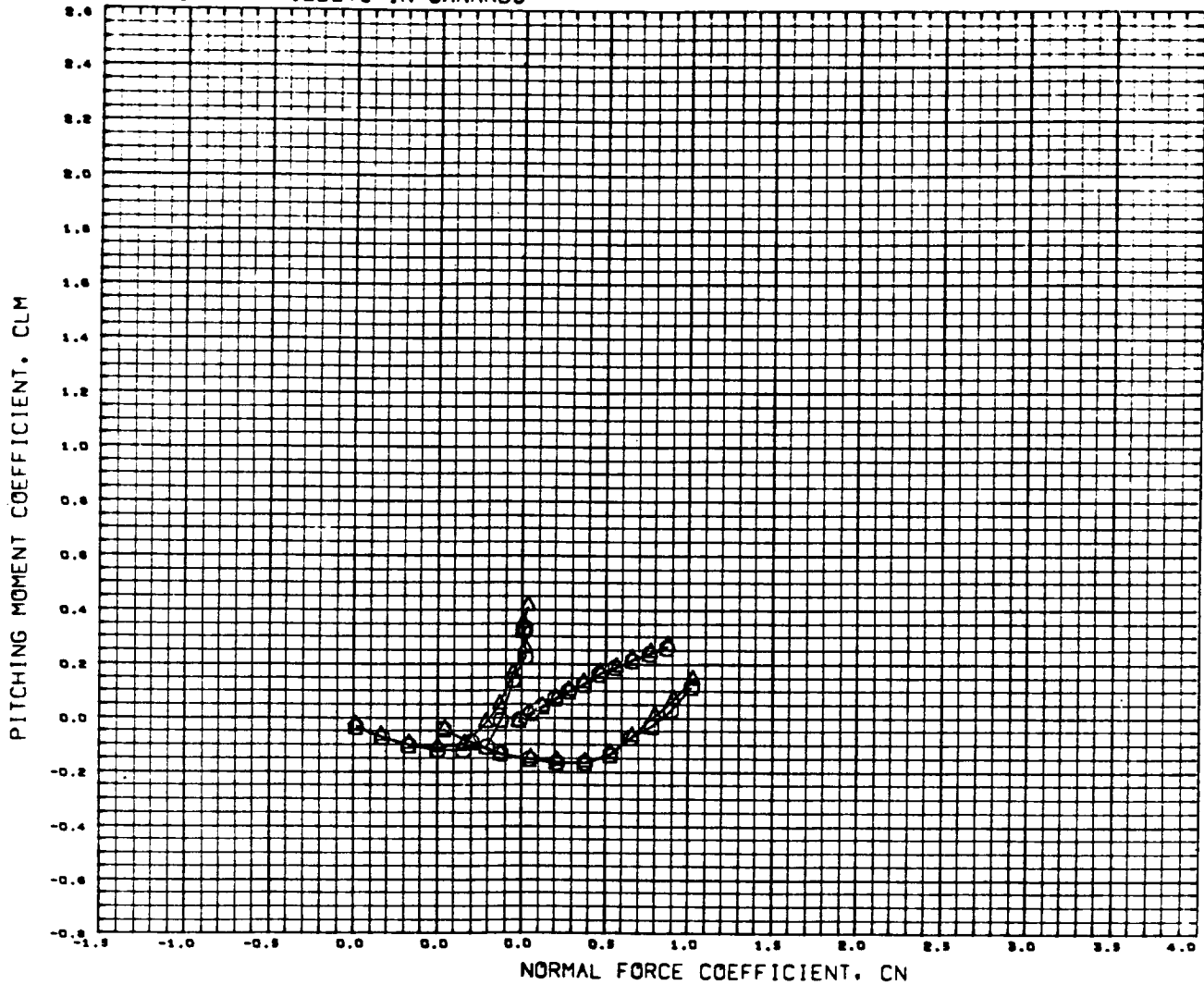


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	CANARD
(E3017A)	M496-HSPC AR11901-3 MODEL W082C12V2	0.000	0.000	0.000
(Z3017S)	M496-HSPC AR11901-3 MODEL W082C12V2, WAX PAIRINGS	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LRFP	1.3360	IN.
BRFP	4.3000	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

MACH 0.590 1.197 3.400

EFFECT OF WAX FILLETS IN CANARDS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3817A)
(Z38175)



M496-MSFC AR11981-3 MODEL W6B2C12V2
M496-MSFC AR11981-3 MODEL W6B2C12V2, WAX FAIRINGS

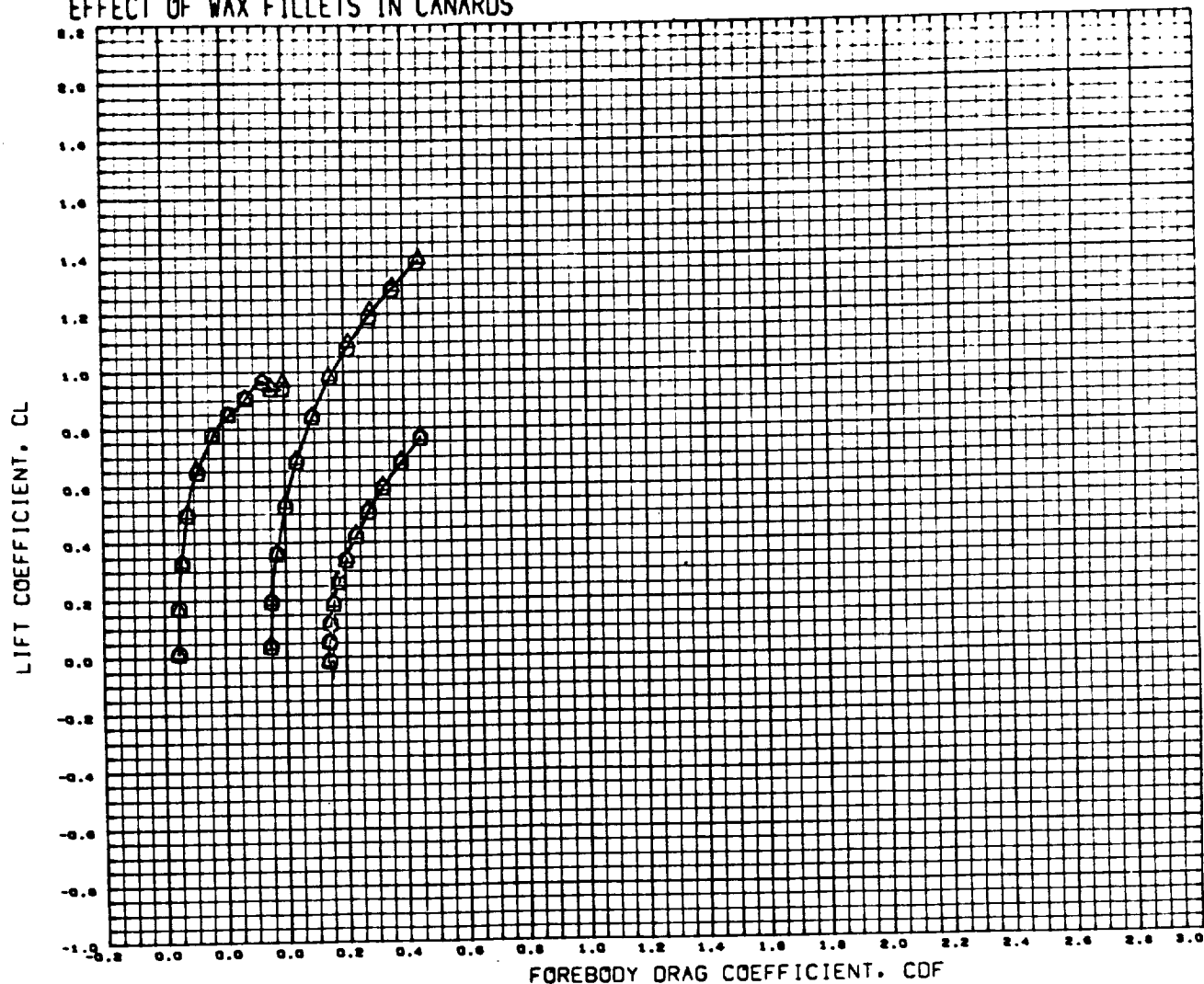
BETA ELEVTR CANARD
0.000 0.000 0.000
0.000 0.000 0.000

REFERENCE INFORMATION

SREF 4.8225 SQ. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

MACH 0.598 1.197 3.480

EFFECT OF WAX FILLETS IN CANARDS



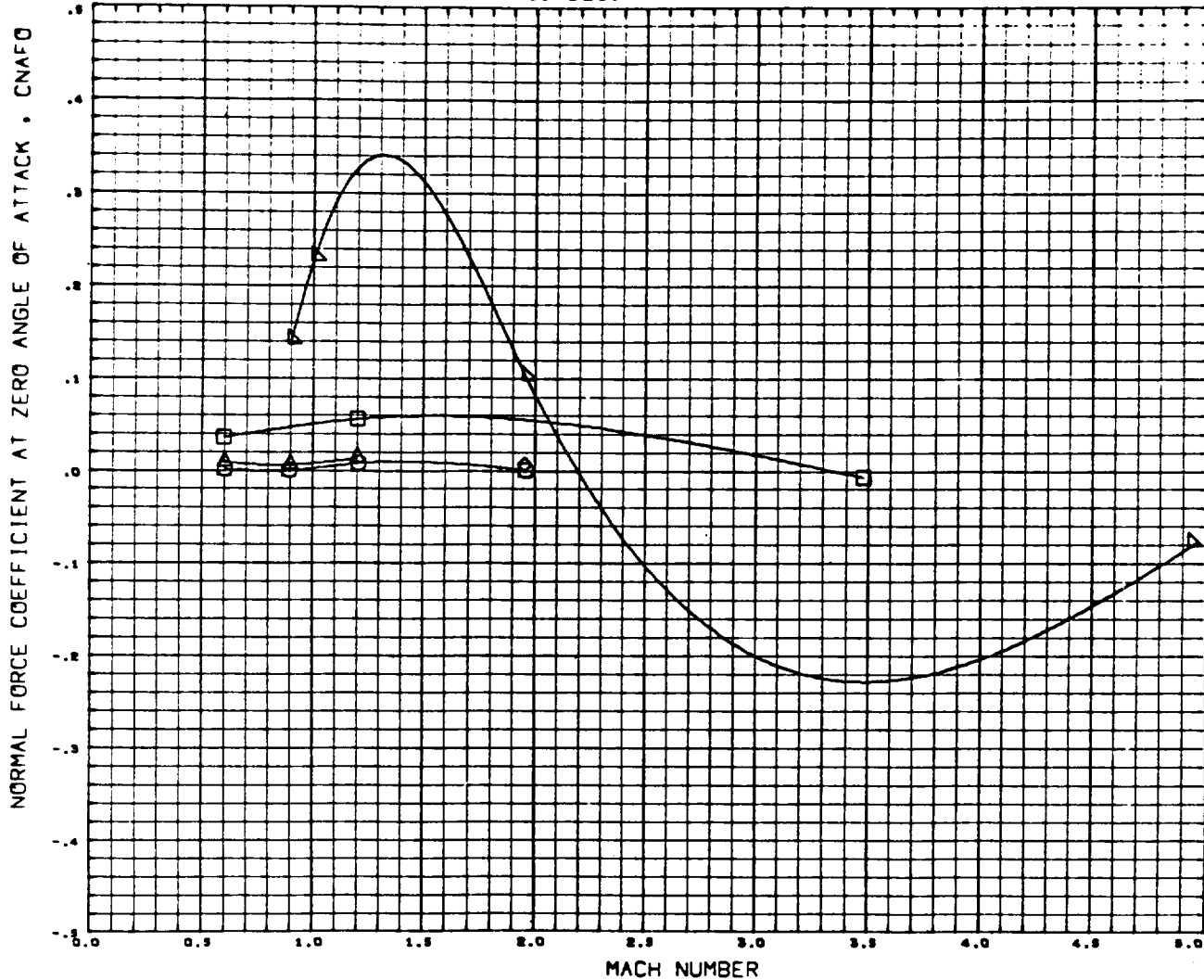
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3617A)	M496-HSFC AR11981-3 MODEL W6B2C12V2
(Z3617S)	M496-HSFC AR11981-3 MODEL W6B2C12V2, WAX FAIRINGS

BETA	ELEVTR	CANARD
0.000	0.000	0.000
0.000	0.000	0.000

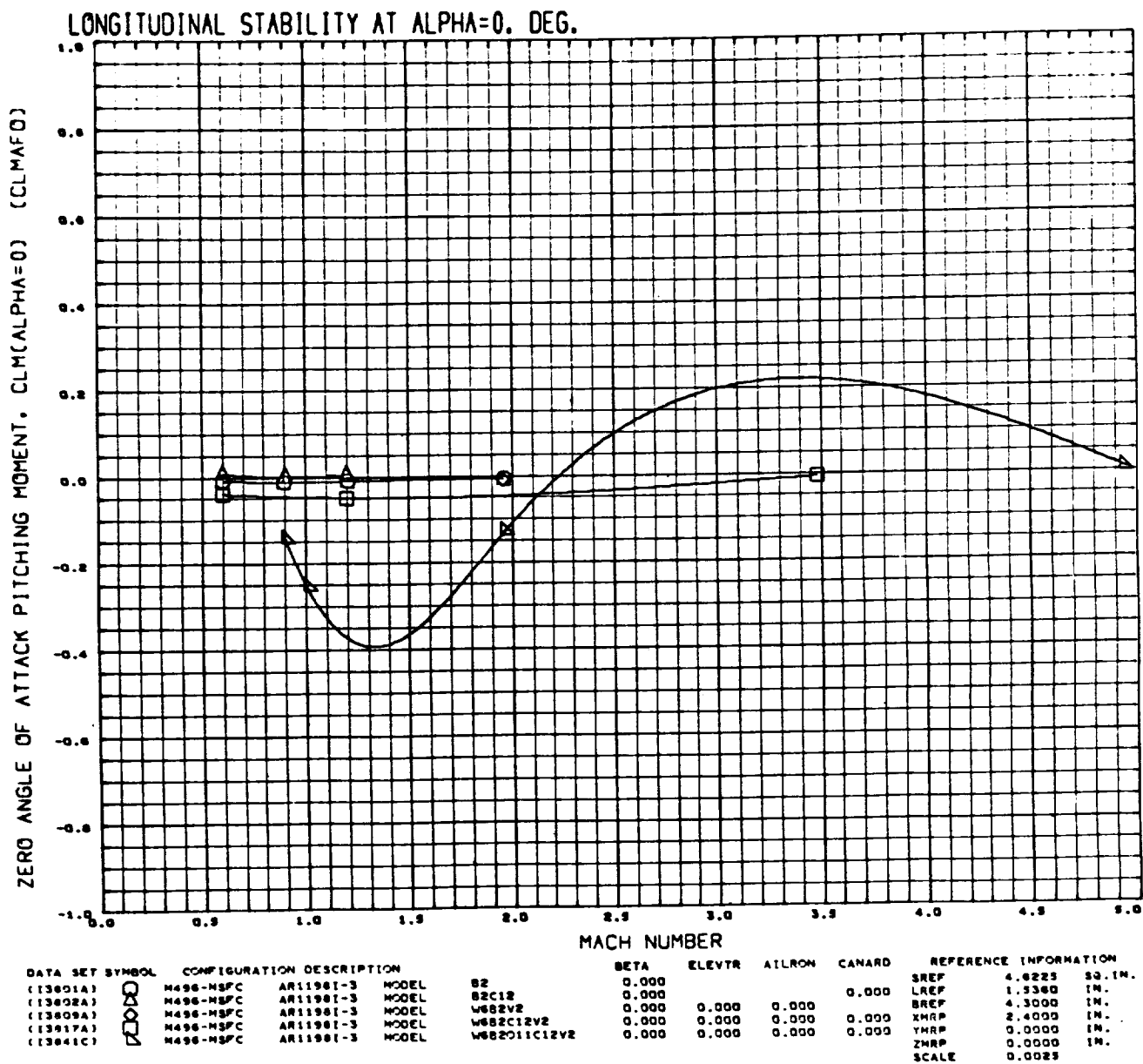
REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.3360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH	0.996	1.197	3.460
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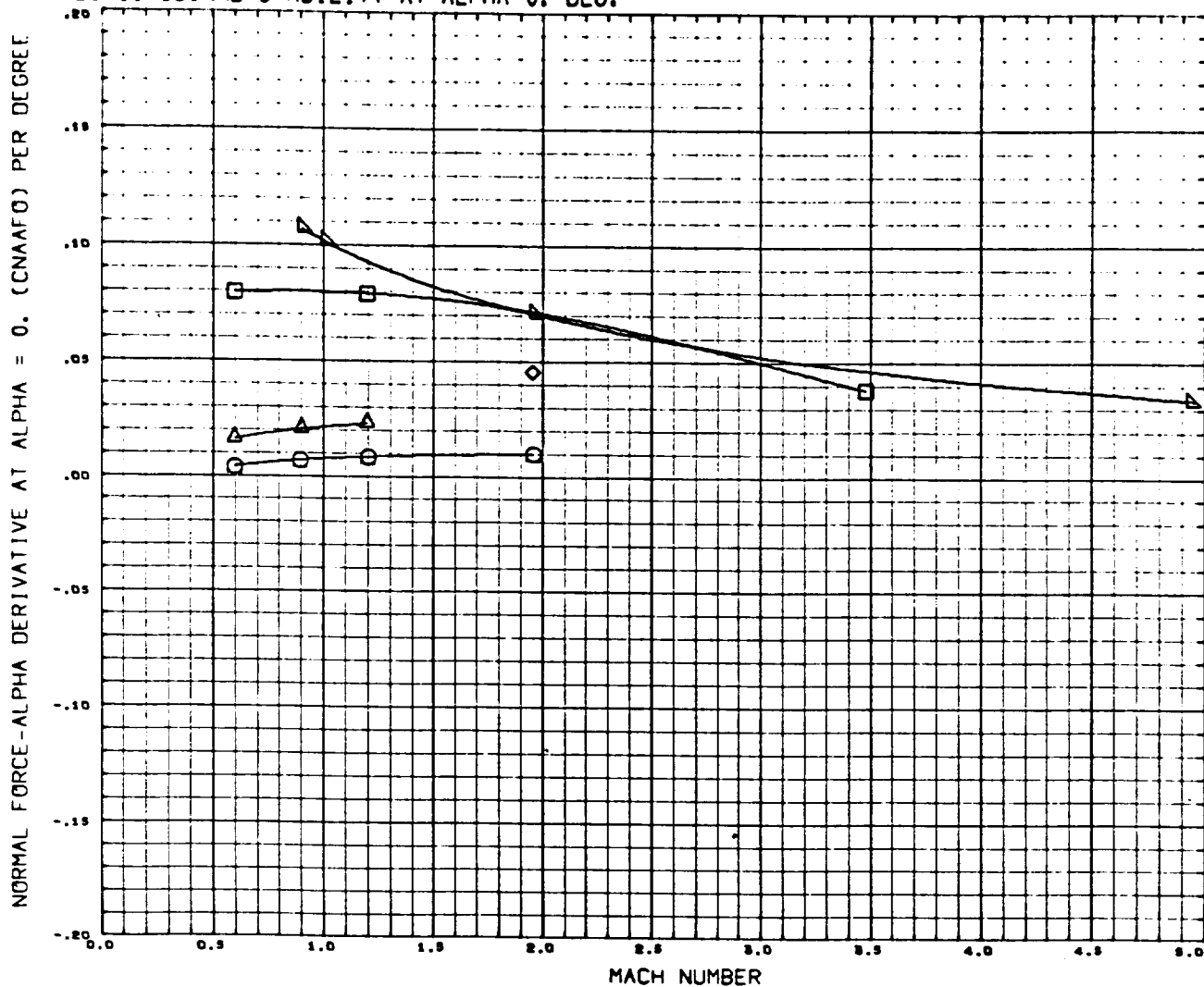
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



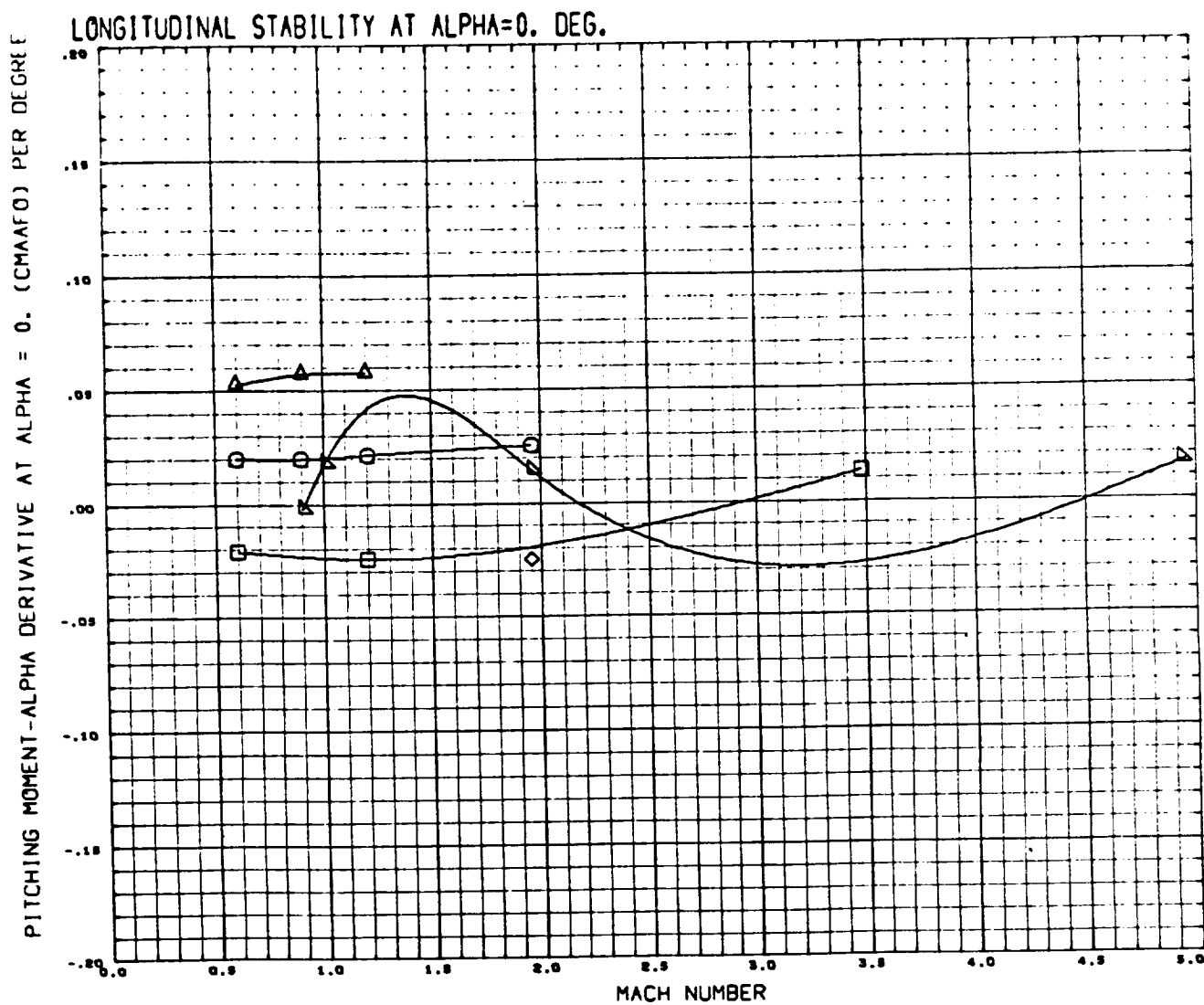
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13801A)	M496-HSFC AR11981-3 MODEL B2	0.000				SREF 4.6225 SQ. IN.
(13802A)	M496-HSFC AR11981-3 MODEL B2C12	0.000				LREF 1.5360 IN.
(13809A)	M496-HSFC AR11981-3 MODEL W6B2V2	0.000	0.000	0.000	0.000	SREF 4.3000 IN.
(13817A)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	ZMRP 2.4000 IN.
(13841C)	M496-HSFC AR11981-3 MODEL W6B2O11C12V2	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025



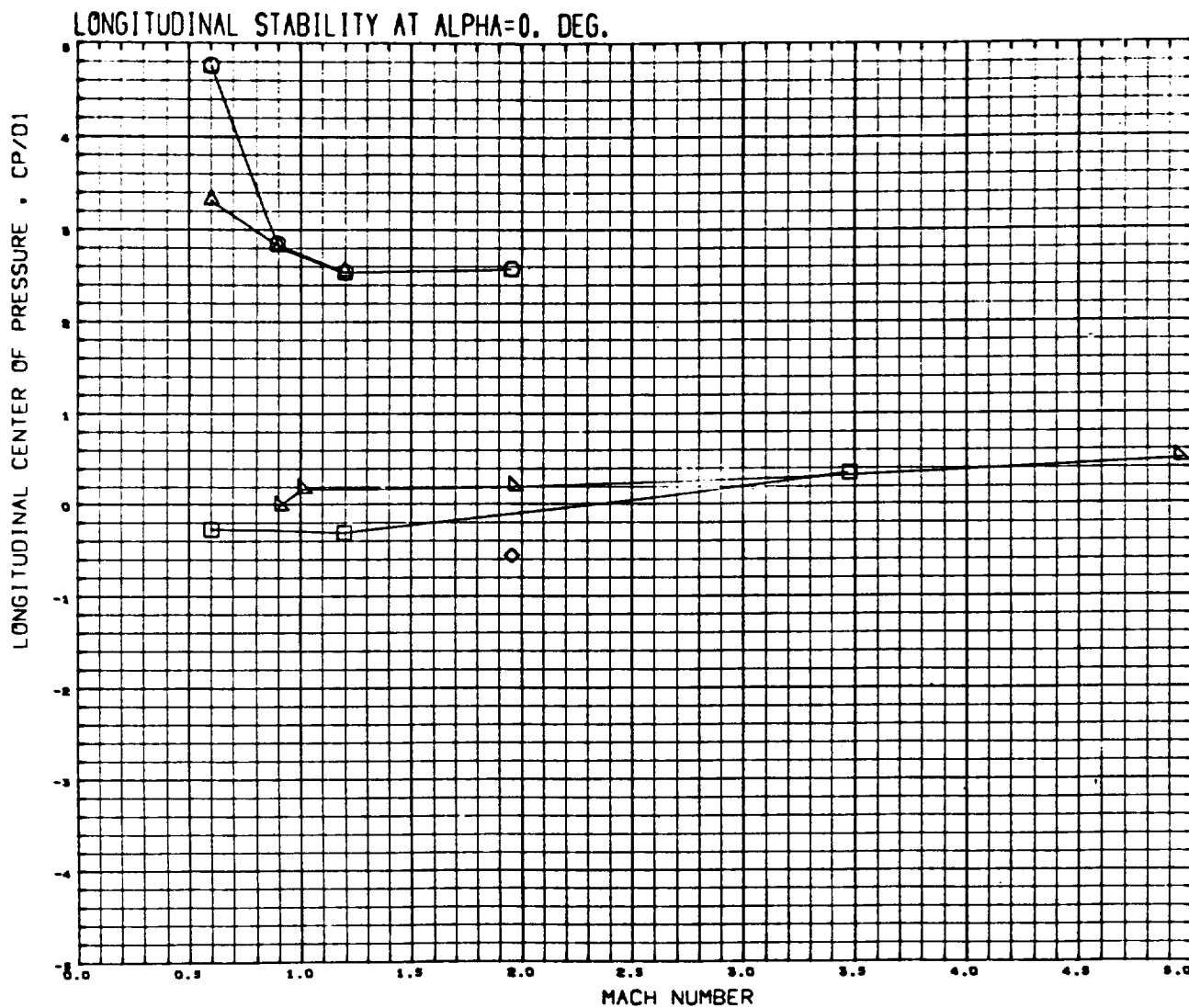
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(13801A)	M496-HSFC AR11981-3 MODEL B2	0.000				SREF 4.6225 80. IN.
(13802A)	M496-HSFC AR11981-3 MODEL B2C12	0.000				LREF 1.5360 IN.
(13809A)	M496-HSFC AR11981-3 MODEL W8B2V2	0.000	0.000	0.000	0.000	SREF 4.3000 IN.
(13817A)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	XMRP 2.4000 IN.
(13841C)	M496-HSFC AR11981-3 MODEL W8B2O11C12V2	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

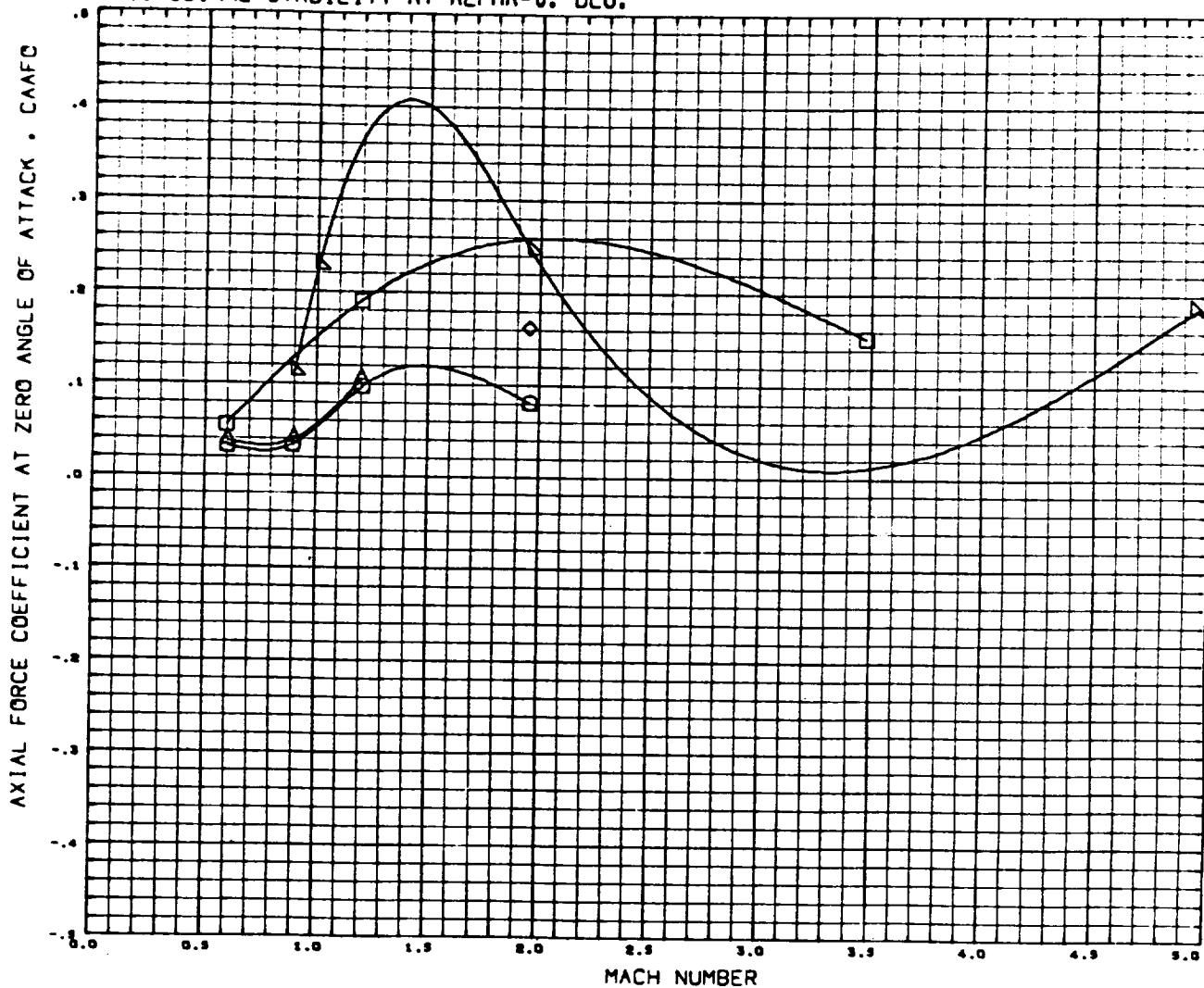


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13801A)	M496-M5FC AR11981-3 MODEL	0.000				SREF 4.6229 30 IN.
(13802A)	M496-M5FC AR11981-3 MODEL	0.000			0.000	LREF 1.3360 IN.
(13809A)	M496-M5FC AR11981-3 MODEL	0.000	0.000	0.000		SREF 4.3000 IN.
(13817A)	M496-M5FC AR11981-3 MODEL	0.000	0.000	0.000	0.000	XMRP 2.4000 IN.
(13841C)	M496-M5FC AR11981-3 MODEL	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0029



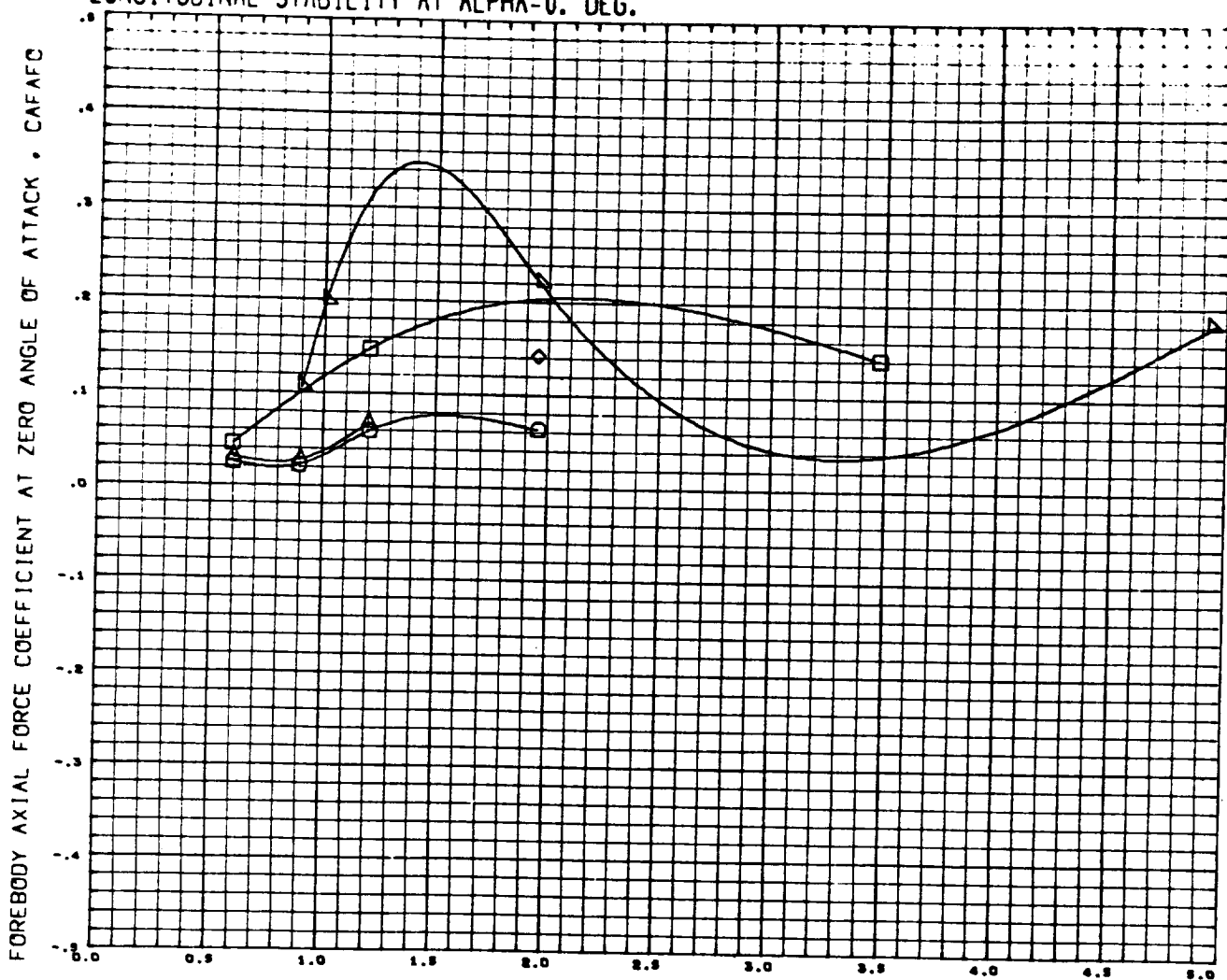
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13601A)	M496-HSFC AR11981-3 MOEL S2	0.000				SREF 4.6225 sq. in.
(13602A)	M496-HSFC AR11981-3 MOEL S2C12	0.000				LREF 1.9360 in.
(13609A)	M496-HSFC AR11981-3 MOEL W6B2V2	0.000	0.000	0.000	0.000	SREF 4.3000 in.
(13617A)	M496-HSFC AR11981-3 MOEL W6B2C12V2	0.000	0.000	0.000	0.000	XMRP 2.4000 in.
(13641C)	M496-HSFC AR11981-3 MOEL W6B2D11C12V2	0.000	0.000	0.000	0.000	YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	MODEL	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13801A)	M496-HSPC	AR11981-3	MODEL	82	0.000	0.000	0.000	SREF 4.6225 30. IN.
(13802A)	M496-HSPC	AR11981-3	MODEL	82C12	0.000	0.000	0.000	LREF 1.5360 IN.
(13809A)	M496-HSPC	AR11981-3	MODEL	W8B2V2	0.000	0.000	0.000	SREF 4.3000 IN.
(13817A)	M496-HSPC	AR11981-3	MODEL	W8B2C12V2	0.000	0.000	0.000	XHRP 2.4000 IN.
(13841C)	M496-HSPC	AR11981-3	MODEL	W8B2C11C12V2	0.000	0.000	0.000	YHRP 0.0000 IN.
								ZHRP 0.0000 IN.
								SCALE 0.0025

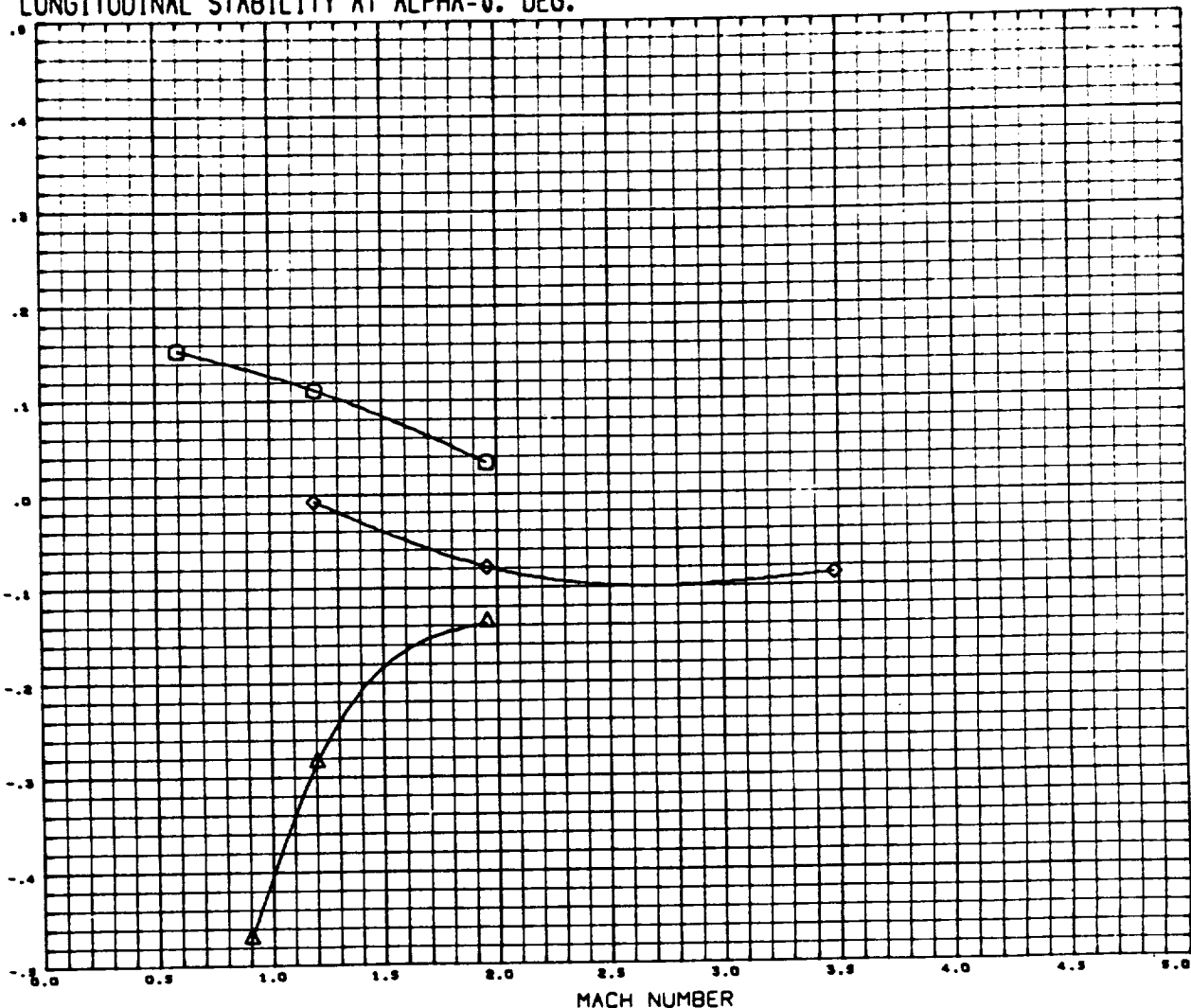
LONGITUDINAL STABILITY AT ALPHA=0. DEG.






DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13801A)	M496-HSFC AR11981-3 MODEL	0.000				SREF 4.6225 SQ. IN.
(13802A)	M496-HSFC AR11981-3 MODEL	0.000				LREF 1.5360 IN.
(13809A)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	BREF 4.3000 IN.
(13917A)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	XMRP 2.4000 IN.
(13841C)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

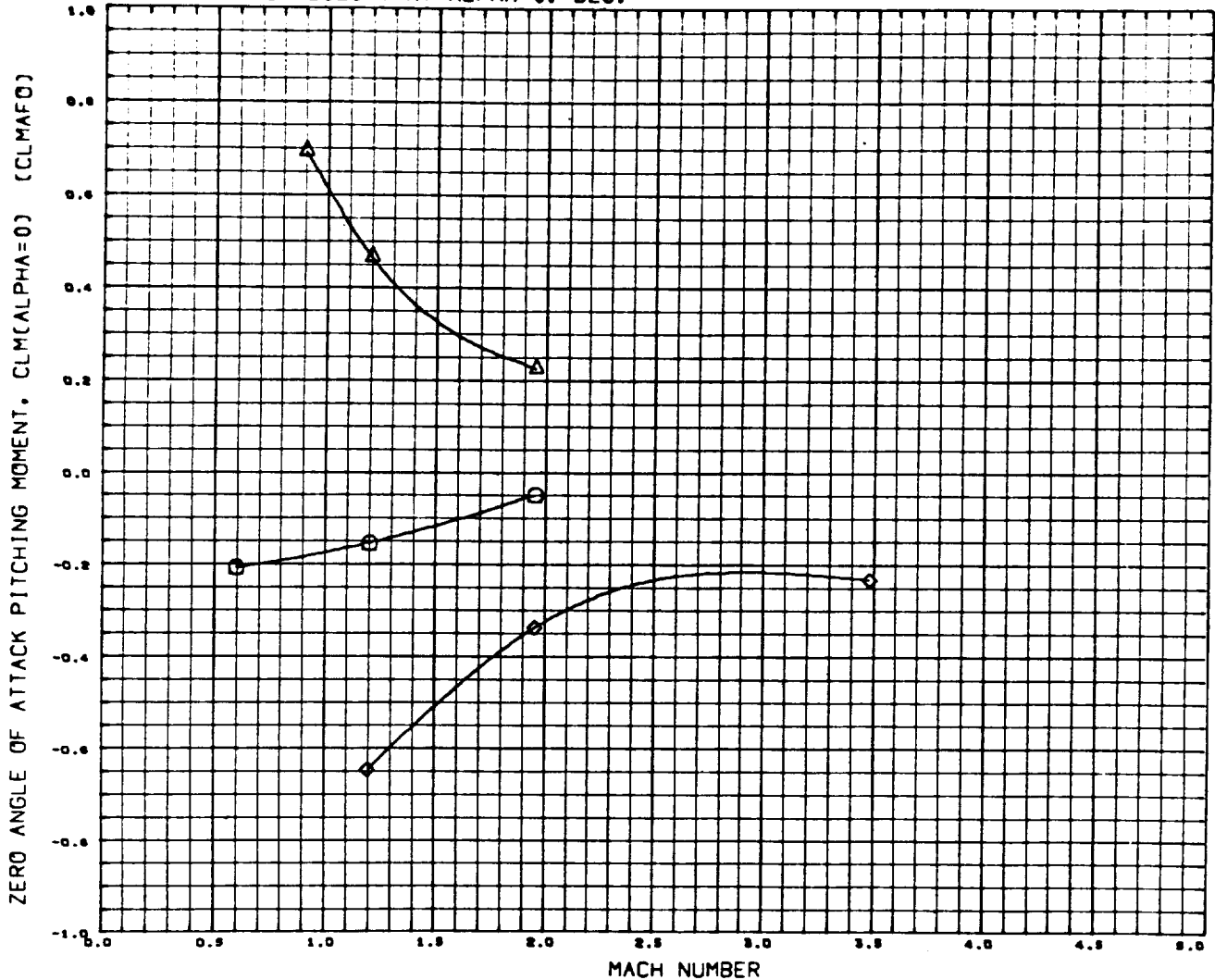
LONGITUDINAL STABILITY AT ALPHA=0. DEG.

NORMAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK • CNAFC



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(13808A) 	N496-NSFC AR11981-3 MODEL W662V2	0.000	5.000	5.000	SREF 4.6225 SQ. IN.
(13811A) 	N496-NSFC AR11981-3 MODEL W662V2	0.000	-30.000	0.000	LREF 1.5360 IN.
(13816A) 	N496-NSFC AR11981-3 MODEL W662C12V2	0.000	0.000	0.000	BREF 4.3000 IN.
					XWRP 2.4000 IN.
					YWRP 0.0000 IN.
					ZWRP 0.0000 IN.
					SCALE 0.0025

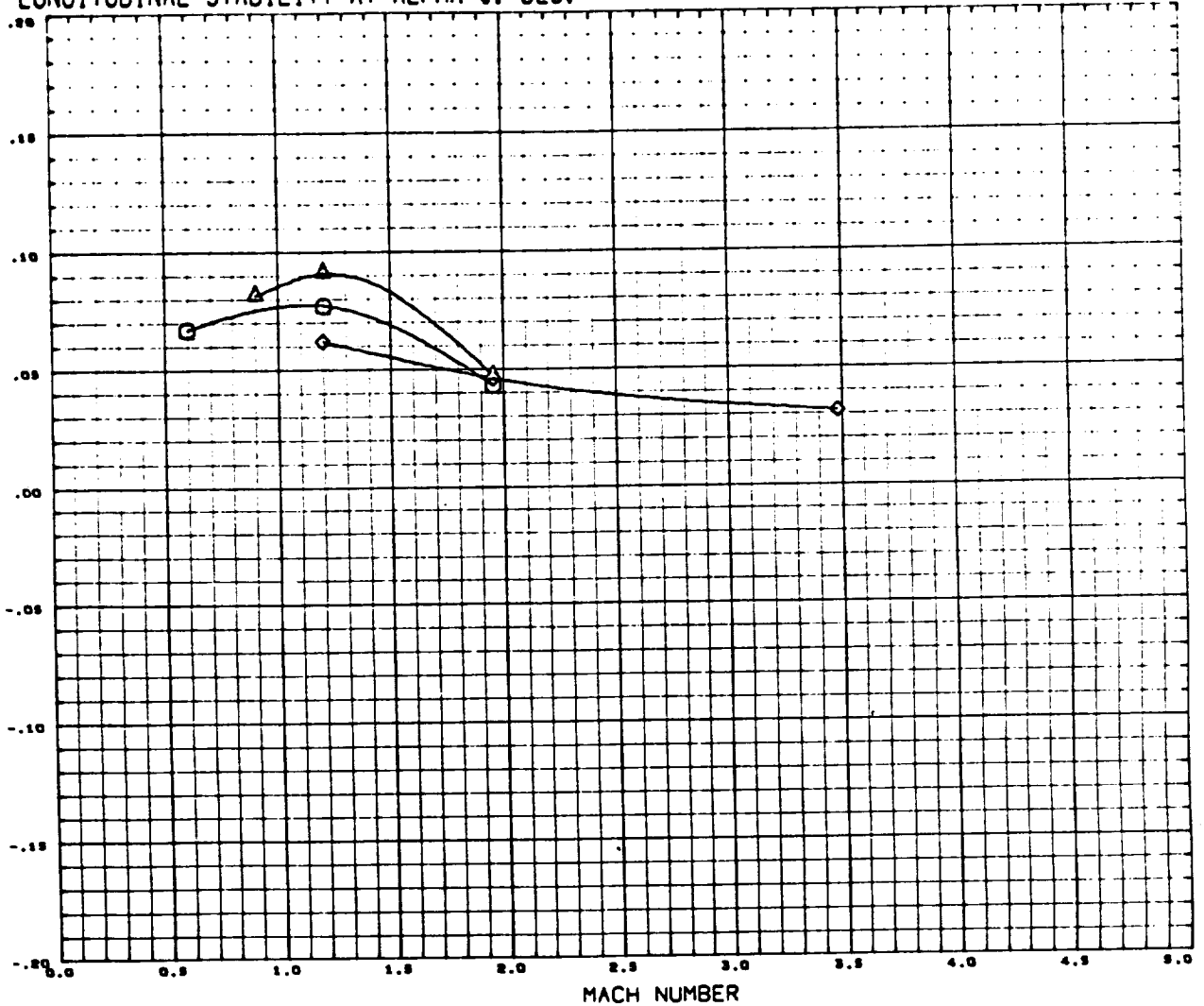
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(13008A)	M496-MSFC AR11981-3 MODEL W8B2VZ	0.000	5.000	5.000	SREF 4.6225 IN.
(13011A)	M496-MSFC AR11981-3 MODEL W8B2VZ	0.000	-30.000	0.000	LREF 1.5360 IN.
(13018A)	M496-MSFC AR11981-3 MODEL W8B2C12VZ	0.000	0.000	0.000	SREF 4.3000 IN.
					XMRP 2.4000 IN.
					YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

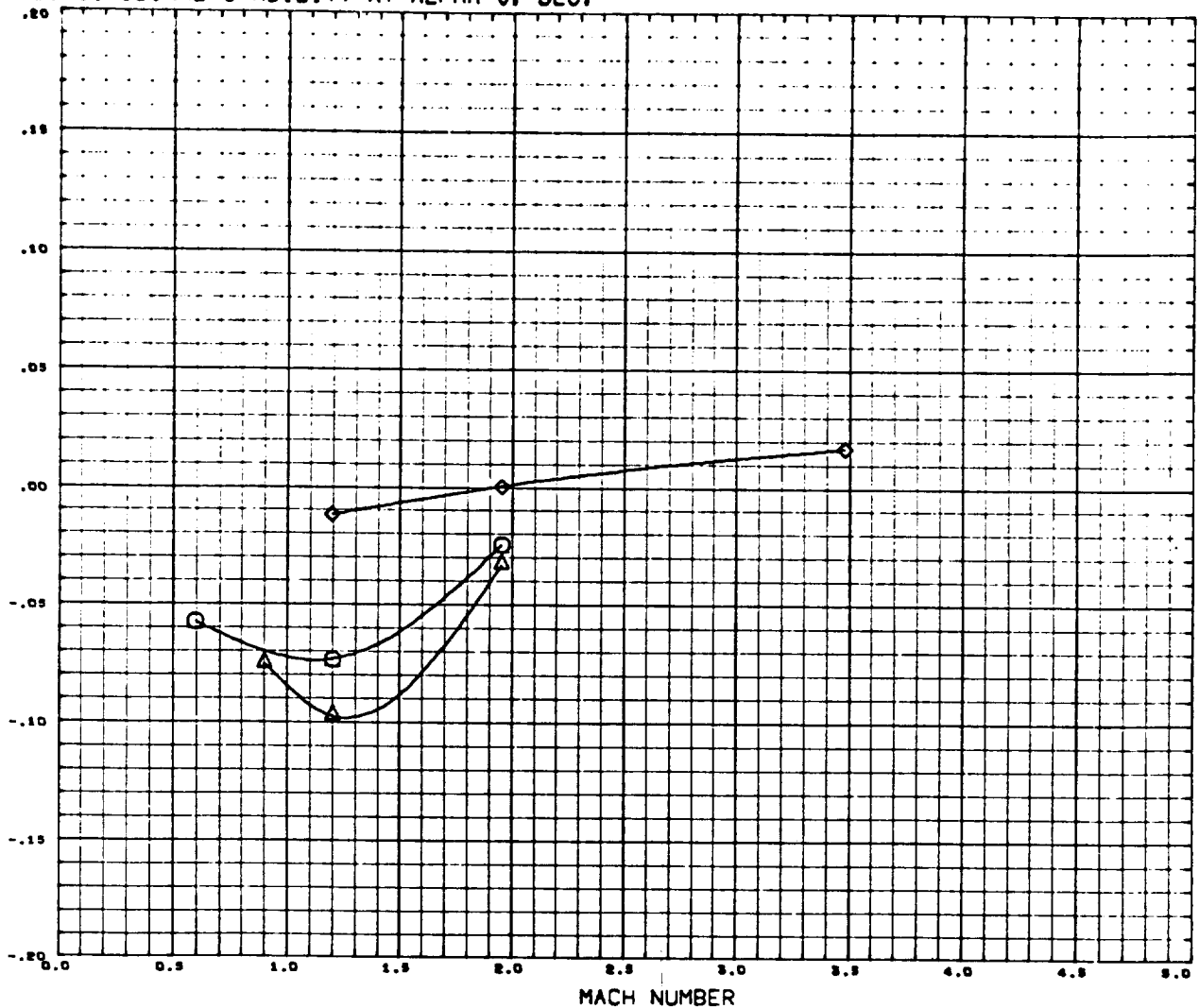
NORMAL FORCE-ALPHA DERIVATIVE AT ALPHA = 0. (CNA/FO) PER DEGREE



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	REFERENCE INFORMATION
(13808A)	M496-HSFC AR11981-3 MODEL	0.000	5.000	5.000	SREF 4.6225 80. IN.
(13811A)	M496-HSFC AR11981-3 MODEL	0.000	-30.000	0.000	LREF 1.3360 1N.
(13819A)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	BREF 4.3000 1N.
					XMRP 2.4000 1N.
					YMRP 0.0000 1N.
					ZMRP 0.0000 1N.
					SCALE 0.0025

PITCHING MOMENT-ALPHA DERIVATIVE AT ALPHA = 0. (CMAAF0) PER DEGREE

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

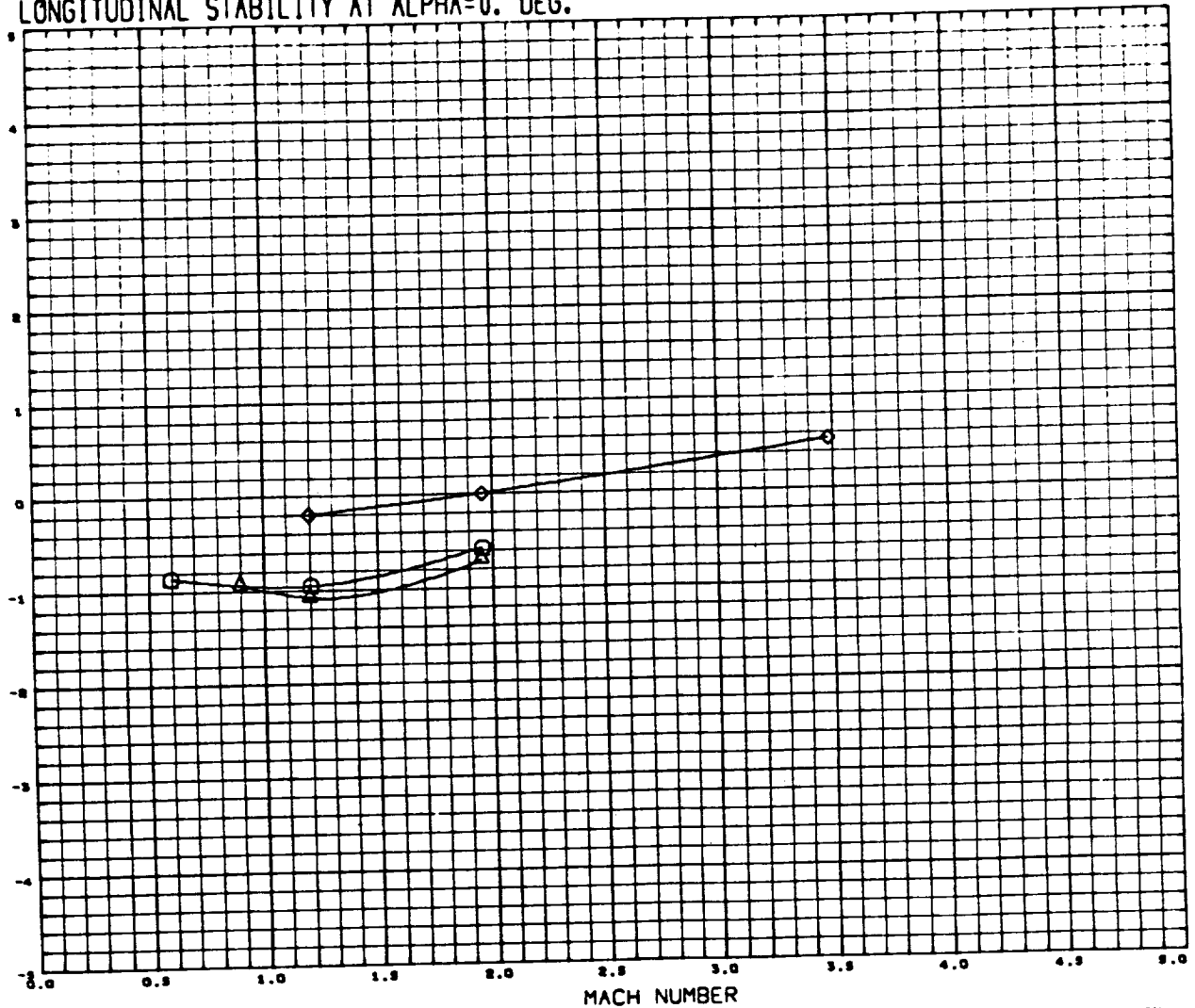


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(13608A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	5.000	5.000
(13611A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	-30.000	0.000
(13616A)	M496-MSFC AR11981-3 MODEL W822C12V2	0.000	0.000	0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

LONGITUDINAL CENTER OF PRESSURE • CP/D!

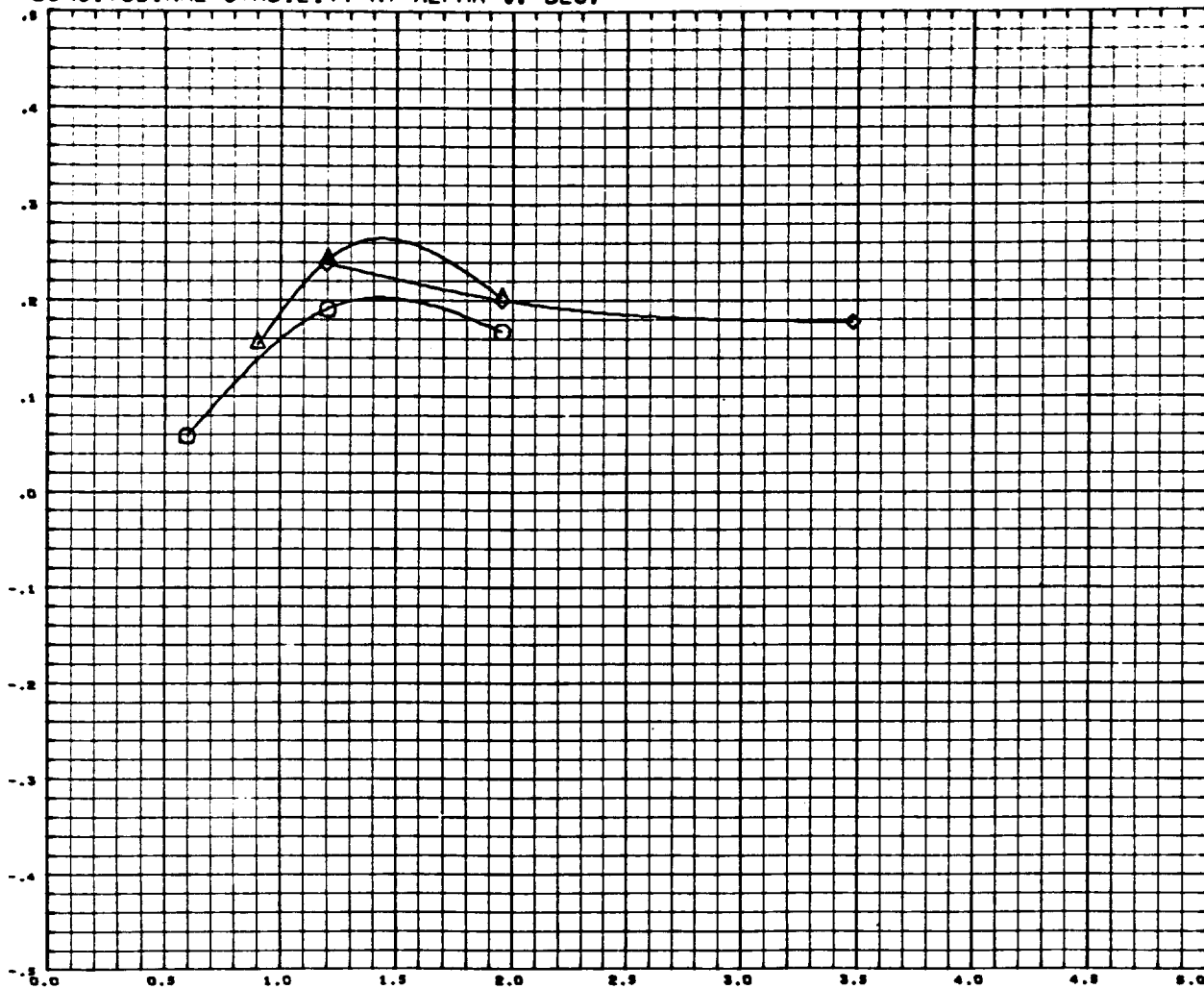


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(13808A)	M496-HSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000
(13811A)	M496-HSFC AR11981-3 MODEL W882V2	0.000	-30.000	0.000
(13816A)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XMRP	2.4070 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

AXIAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK, CAAFO

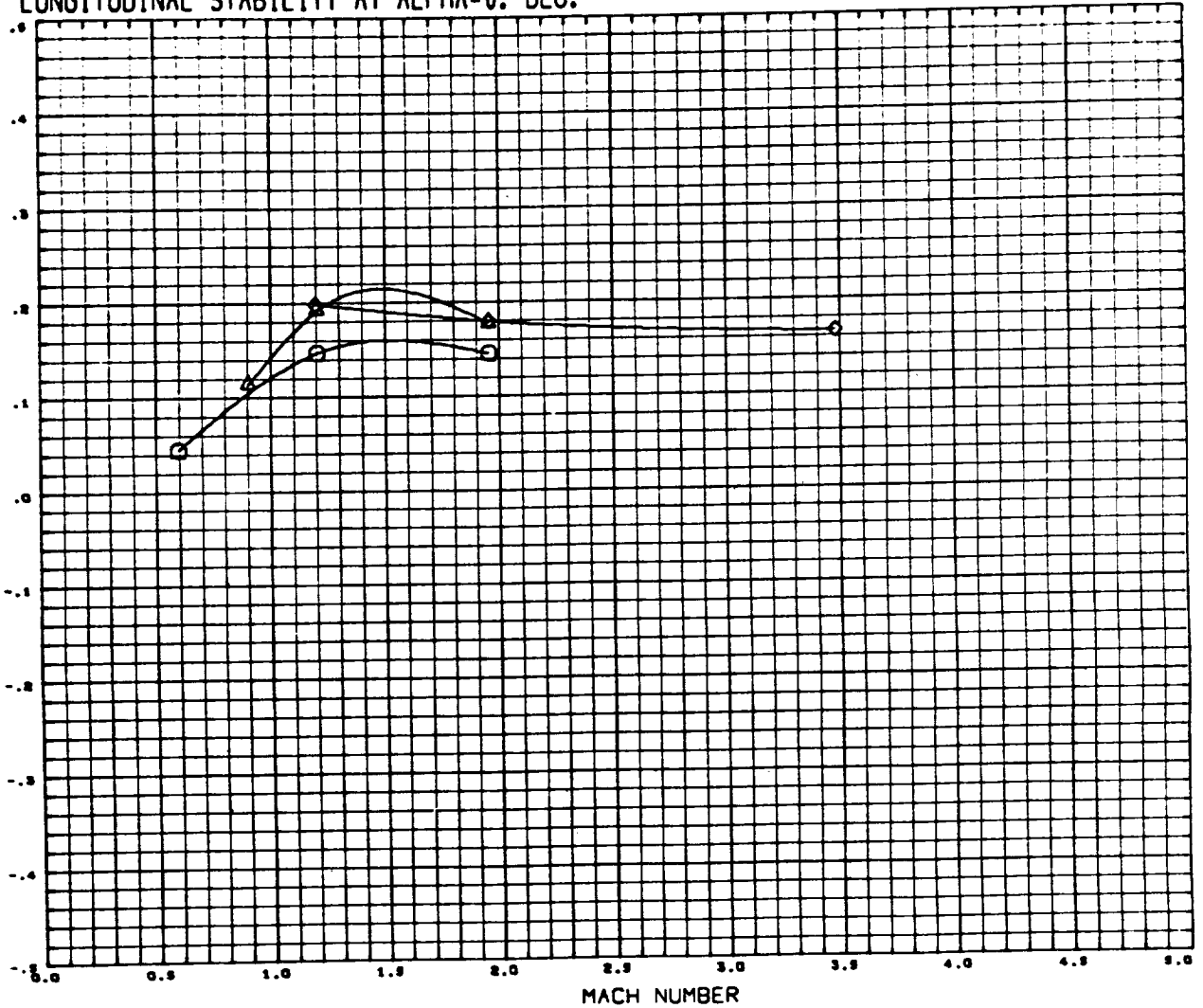


MACH NUMBER

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(13000A)	M496-MSFC AR11981-3 MOEL W82V2	0.000	5.000	5.000	SREF 4.6225 SQ. IN.
(13011A)	M496-MSFC AR11981-3 MOEL W82V2	0.000	-30.000	0.000	LREF 1.5360 IN.
(13910A)	M496-MSFC AR11981-3 MOEL W82C12V2	0.000	0.000	0.000	BREF 4.3000 IN.
					XMRP 2.4000 IN.
					YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

FOREBODY AXIAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK - C_{AF}AFO

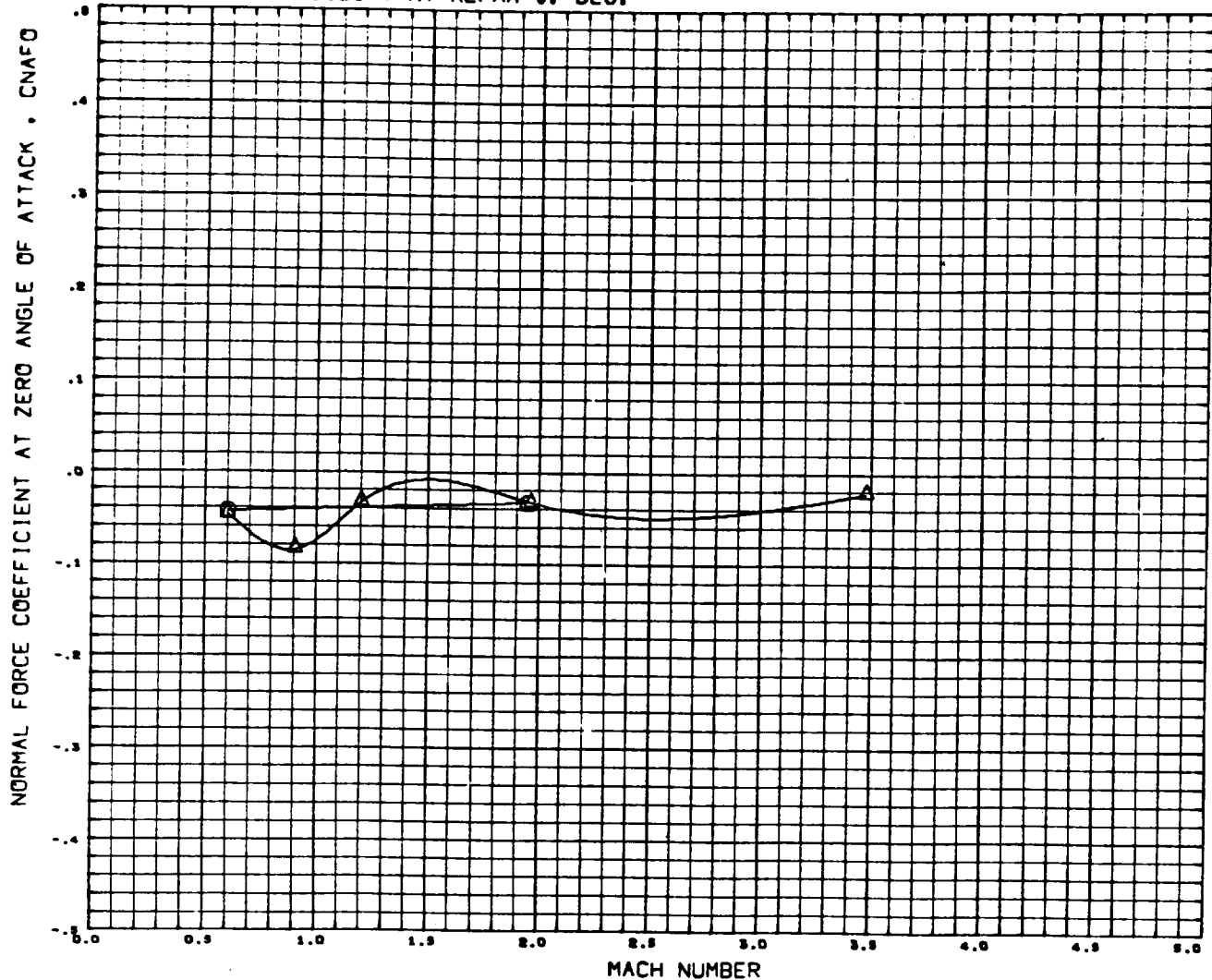


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(13008A)	M496-MSFC AR11981-3 MODEL
(13011A)	M496-MSFC AR11981-3 MODEL
(13018A)	M496-MSFC AR11981-3 MODEL

BETA	ELEVTR	AILRON
0.000	5.000	5.000
0.000	-30.000	0.000
0.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 50. IN.
LREF	1.3360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLON	CANARD	REFERENCE INFORMATION
(13020A)	M496-MSFC AR11901-3 MODEL W4B2V2	0.000	0.000	0.000		SREF 4.9327 80.1N.
(13029A)	M496-MSFC AR11901-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	LREF 1.6980 1N.
						SREF 3.7200 1N.
						XMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

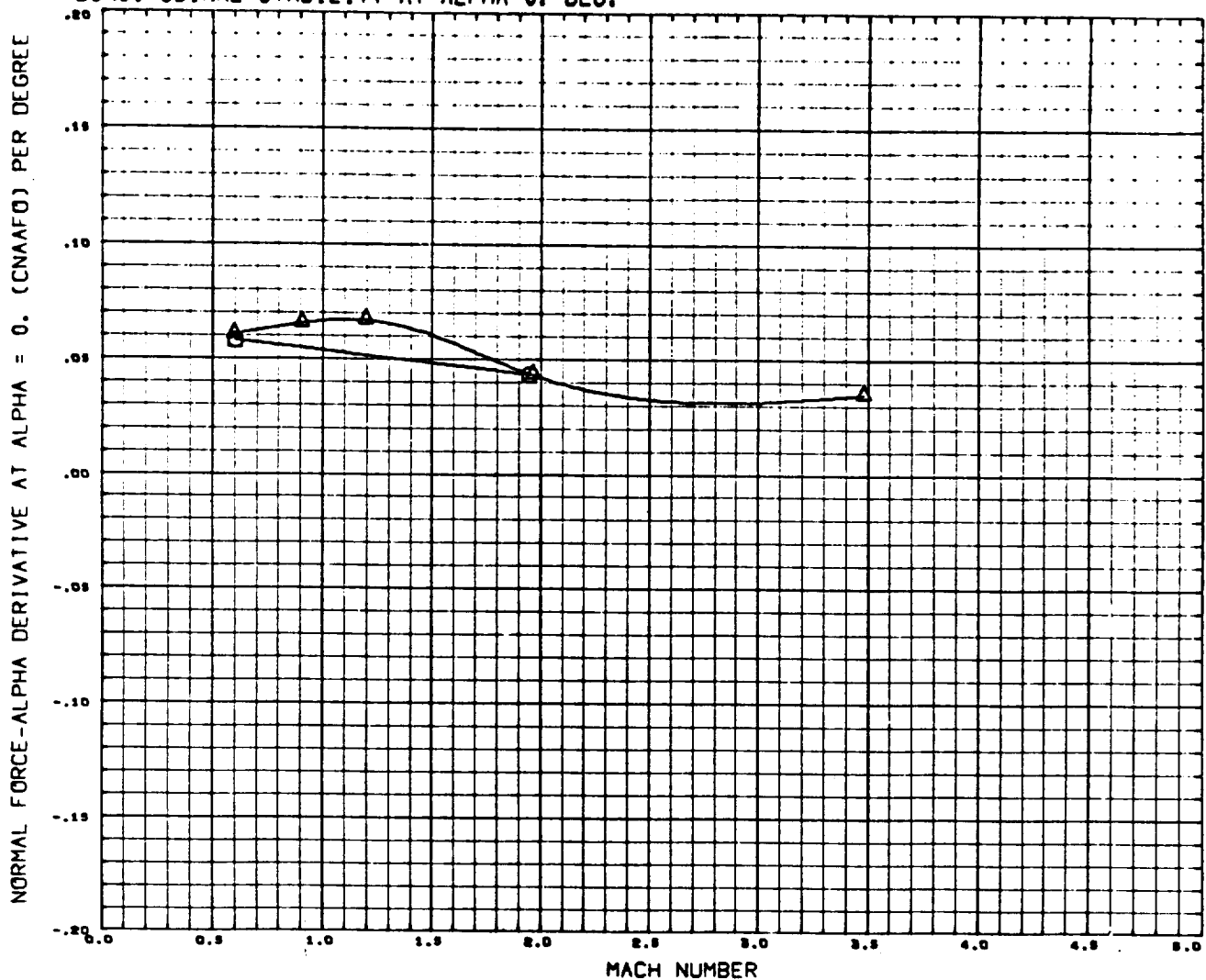
LONGITUDINAL STABILITY AT ALPHA=0. DEG.

ZERO ANGLE OF ATTACK PITCHING MOMENT, $CLM(\alpha=0)$ ($CLMAFO$)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13028A)	M496-H3FC AR11981-3 MODEL W482V2	0.000	0.000	0.000	0.000	SREP 4.9327 SQ. IN.
(13029A)	M496-H3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	LREP 1.8980 IN.
						BREP 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

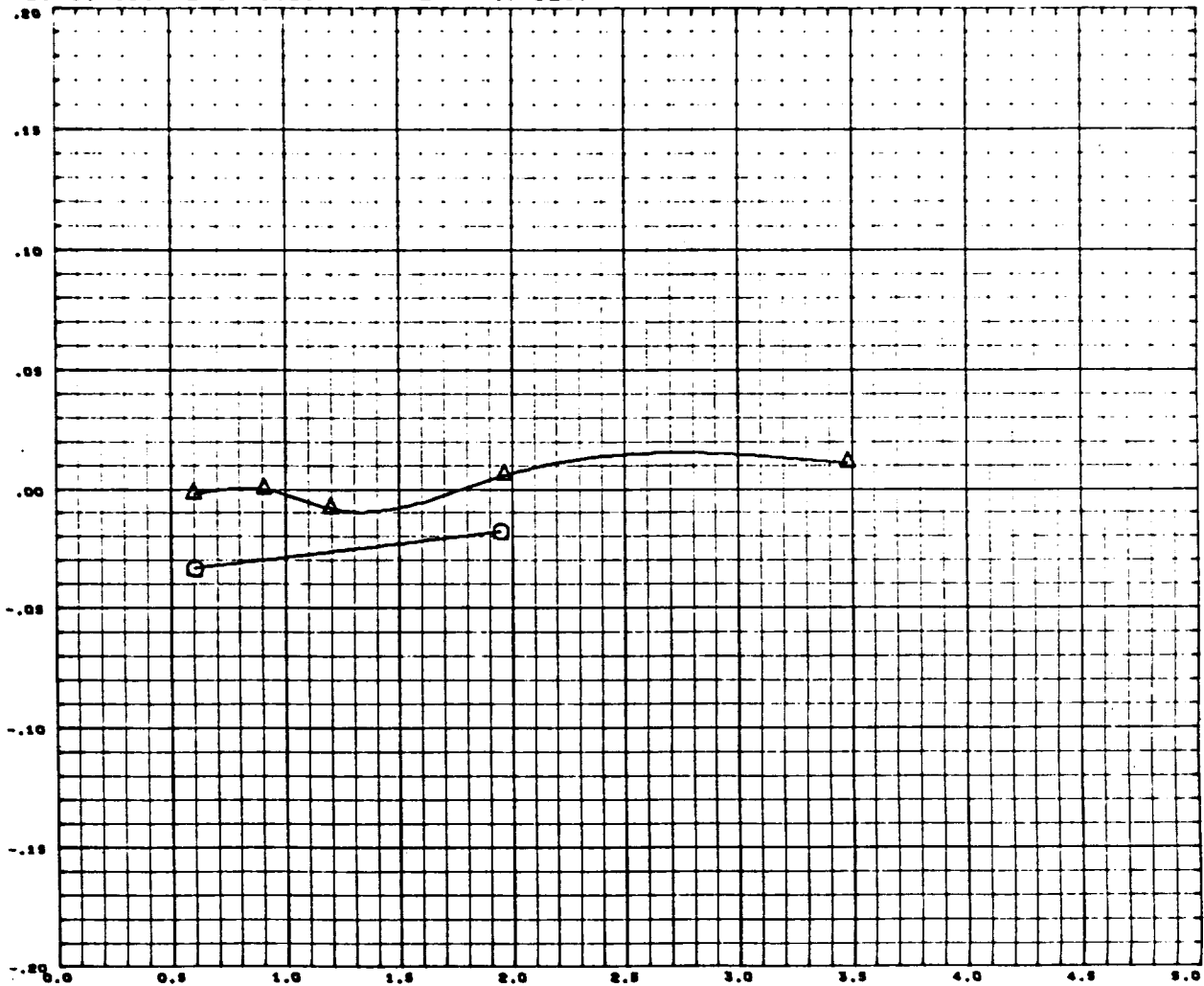
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13828A)	H496-HSFC AR11981-S MODEL W482V2	0.000	0.000	0.000		SREF 4.0327 80. IN.
(13829A)	H496-HSFC AR11981-S MODEL W482C12V2	0.000	0.000	0.000	0.000	LREF 1.0980 IN.
						BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

PITCHING MOMENT-ALPHA DERIVATIVE AT ALPHA = 0. (CMAAFO) PER DEGREE

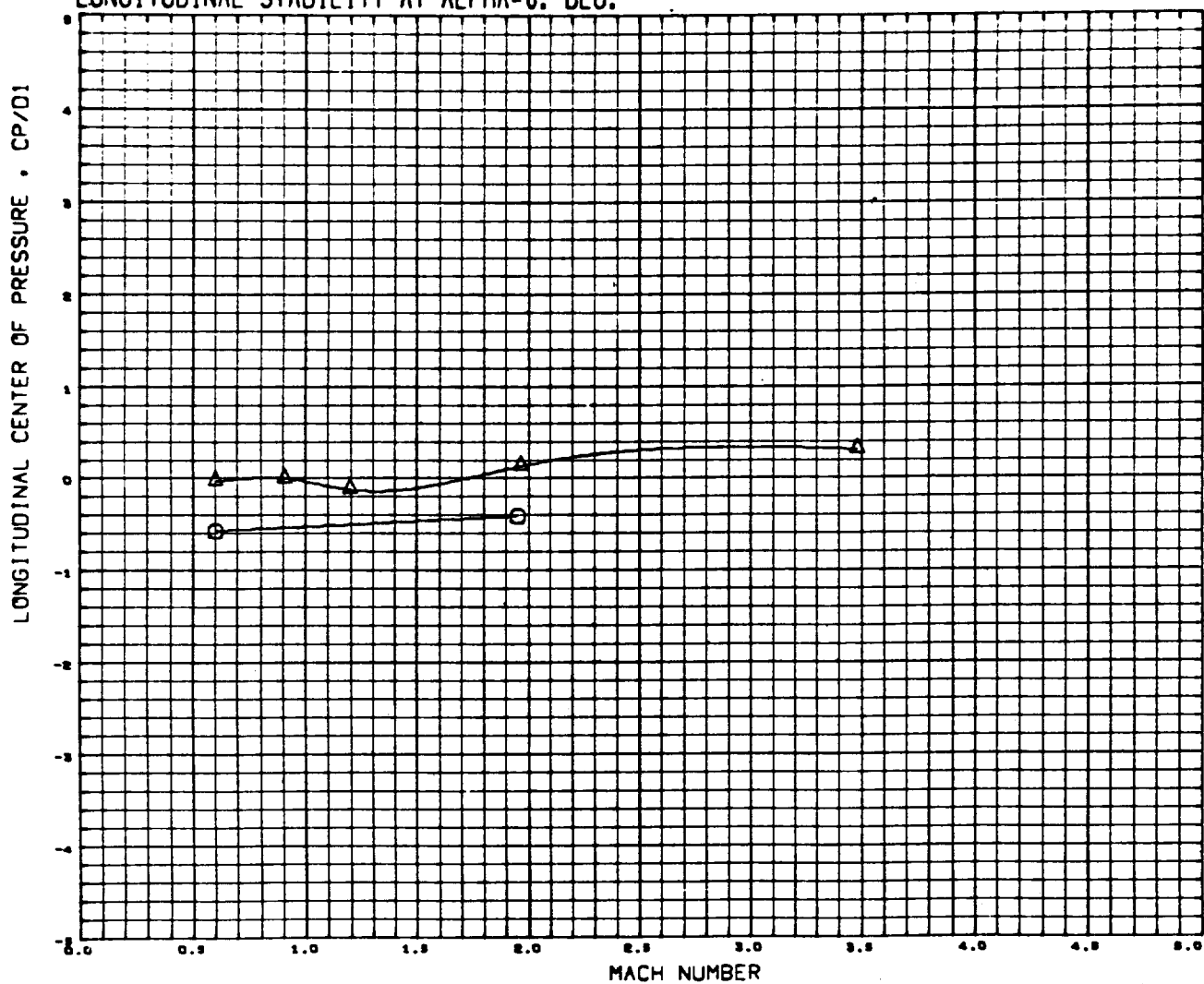
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



MACH NUMBER

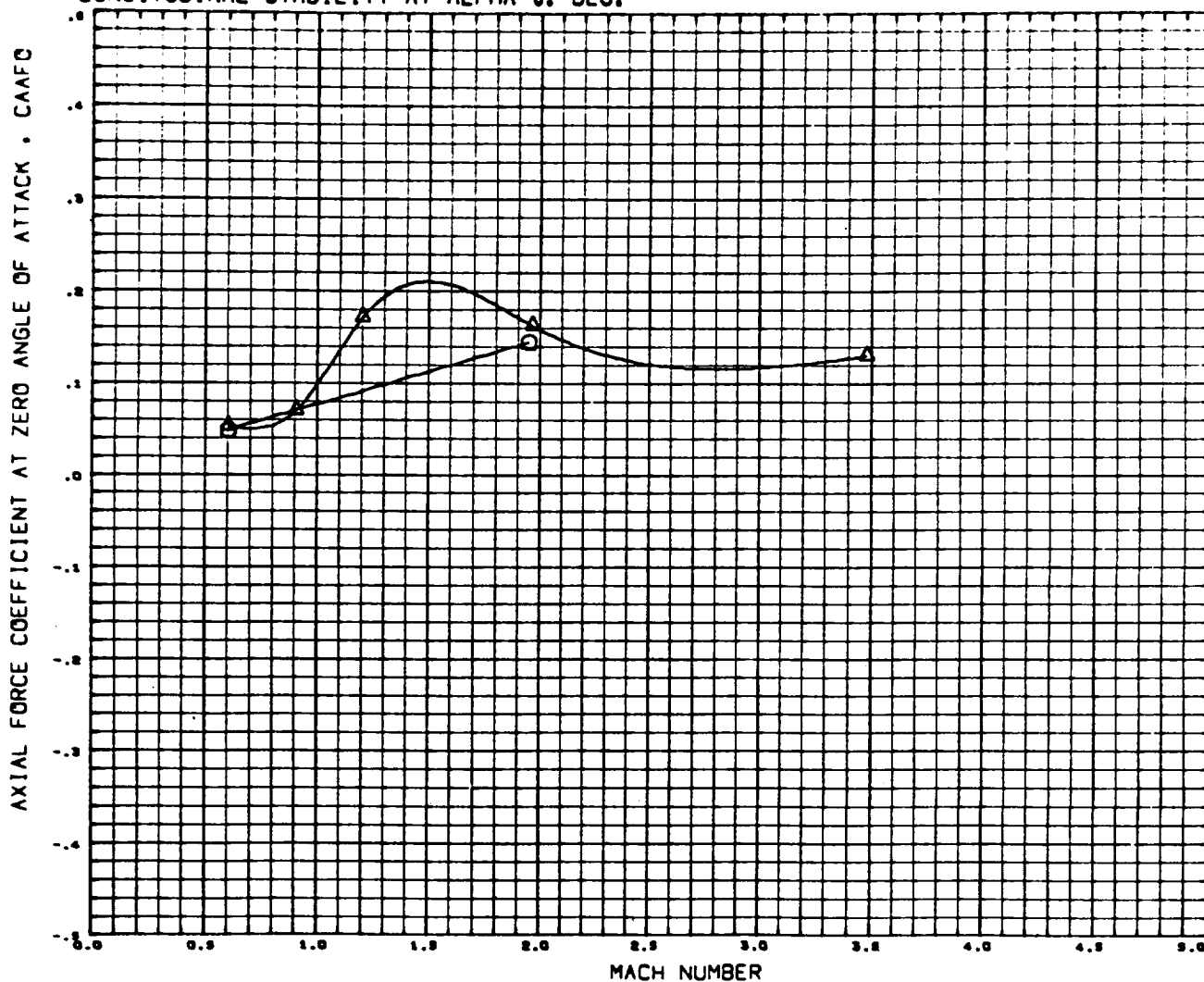
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13628A)	M496-MSPC AR11961-3 MODEL W482V2	0.000	0.000	0.000		SREF 4.9327 SQ. IN.
(13629A)	M496-MSPC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	LREF 1.8980 IN.
						BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

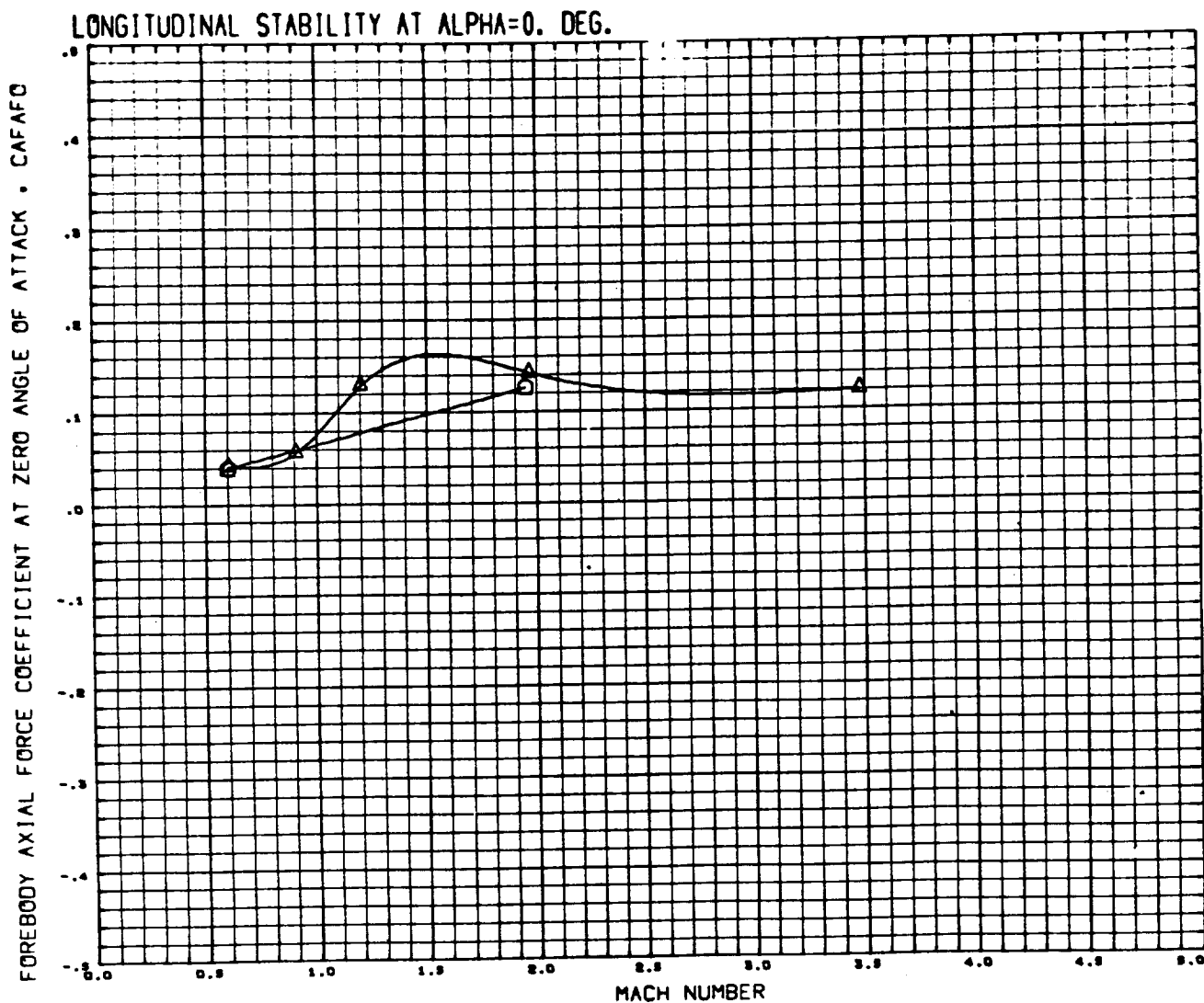


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13826A)	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13829A)	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	LREF 1.8960 IN.
						BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



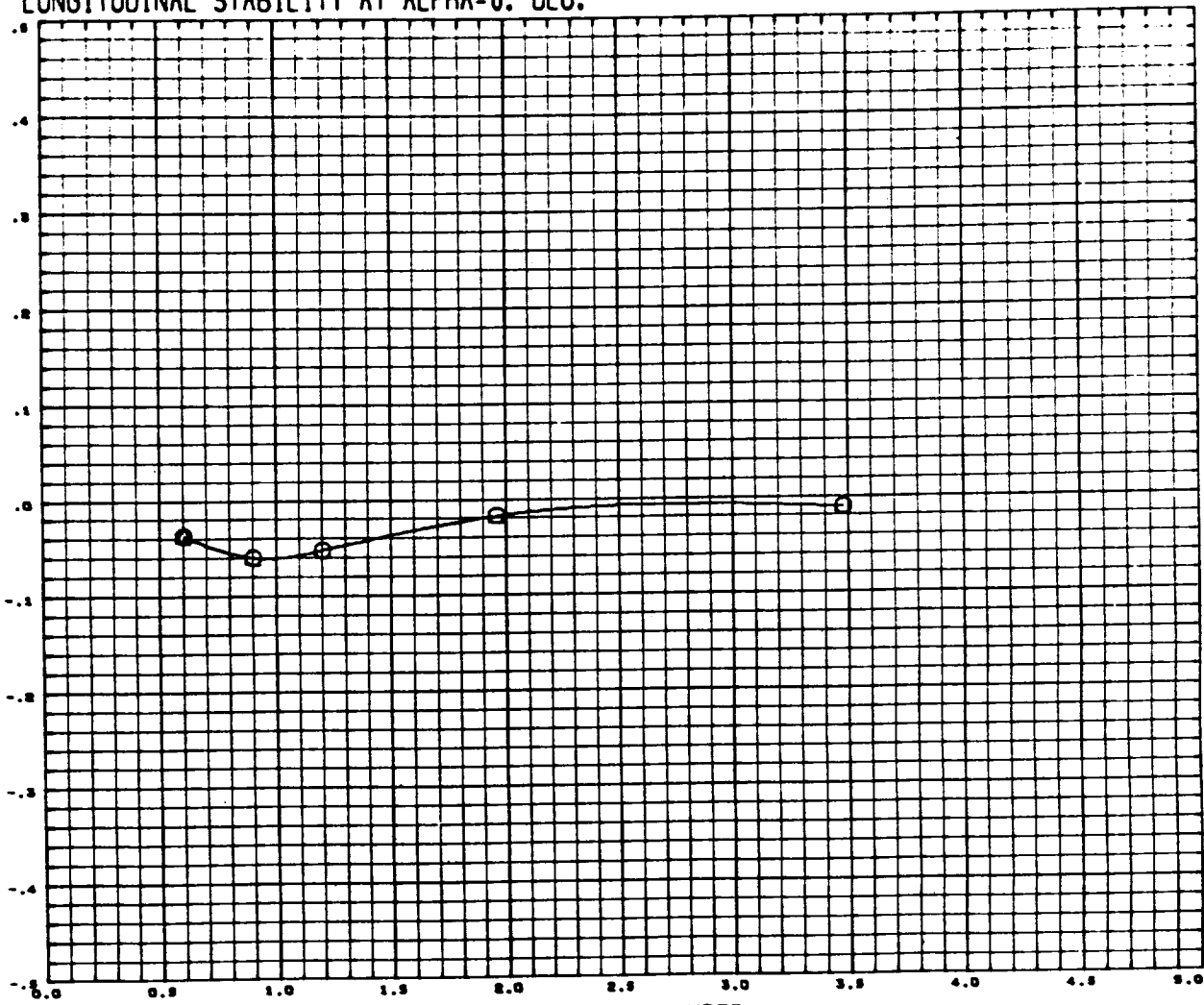
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13028A)	M496-M3FC AR11981-3 MODEL W482VE	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13029A)	M496-M3FC AR11981-3 MODEL W482C12VE	0.000	0.000	0.000	0.000	LREF 1.6940 IN.
						BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(13028A)	M496-MSFC AR11981-3 MODEL WMB2V2	0.000	0.000	0.000	0.000	BREF	4.9327 88. IN.
(13029A)	M496-MSFC AR11981-3 MODEL WMB2C1EV2	0.000	0.000	0.000	0.000	LREF	1.8980 IN.
						BREF	3.7200 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

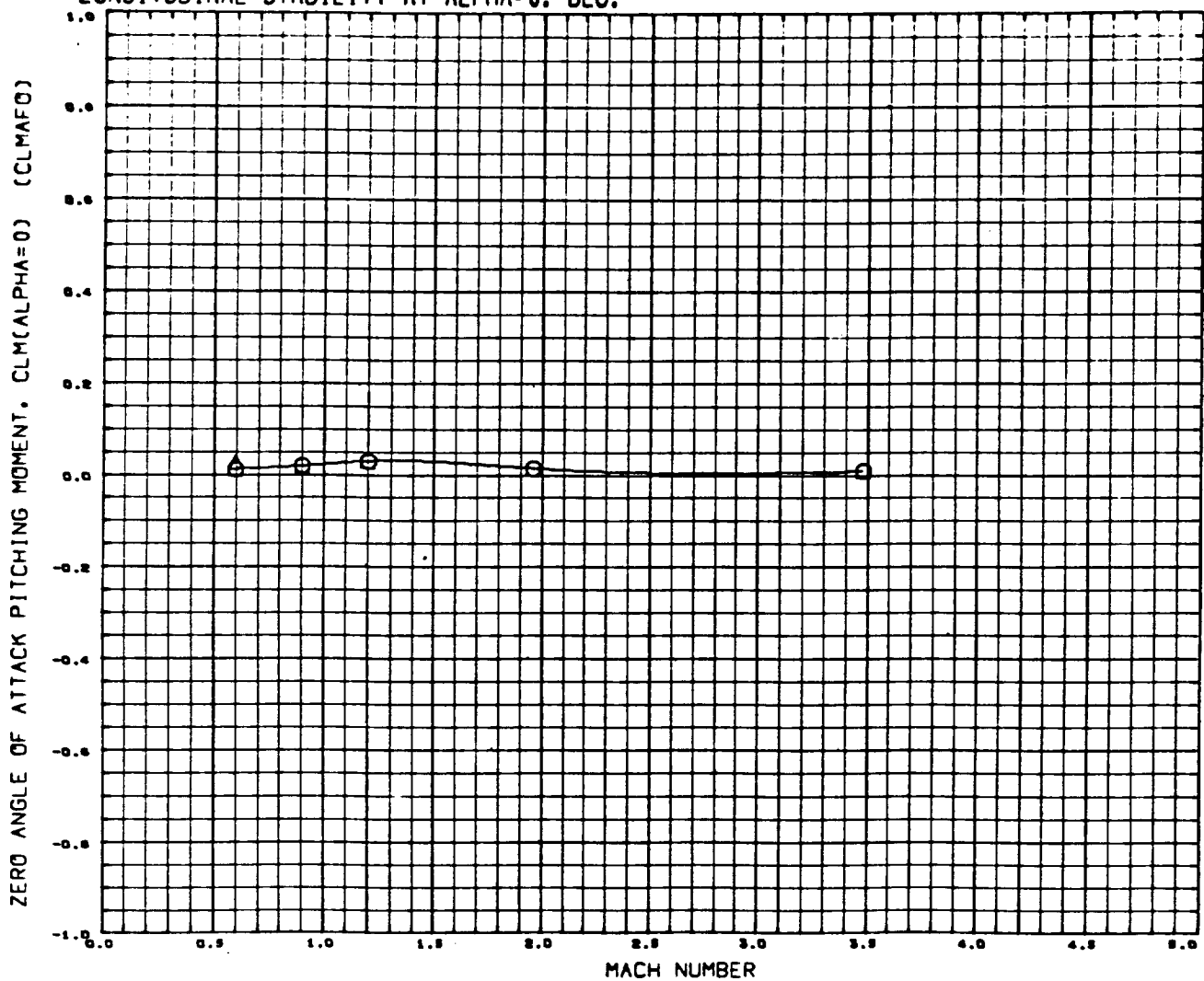
LONGITUDINAL STABILITY AT ALPHA=0. DEG.

NORMAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK - CNAFC



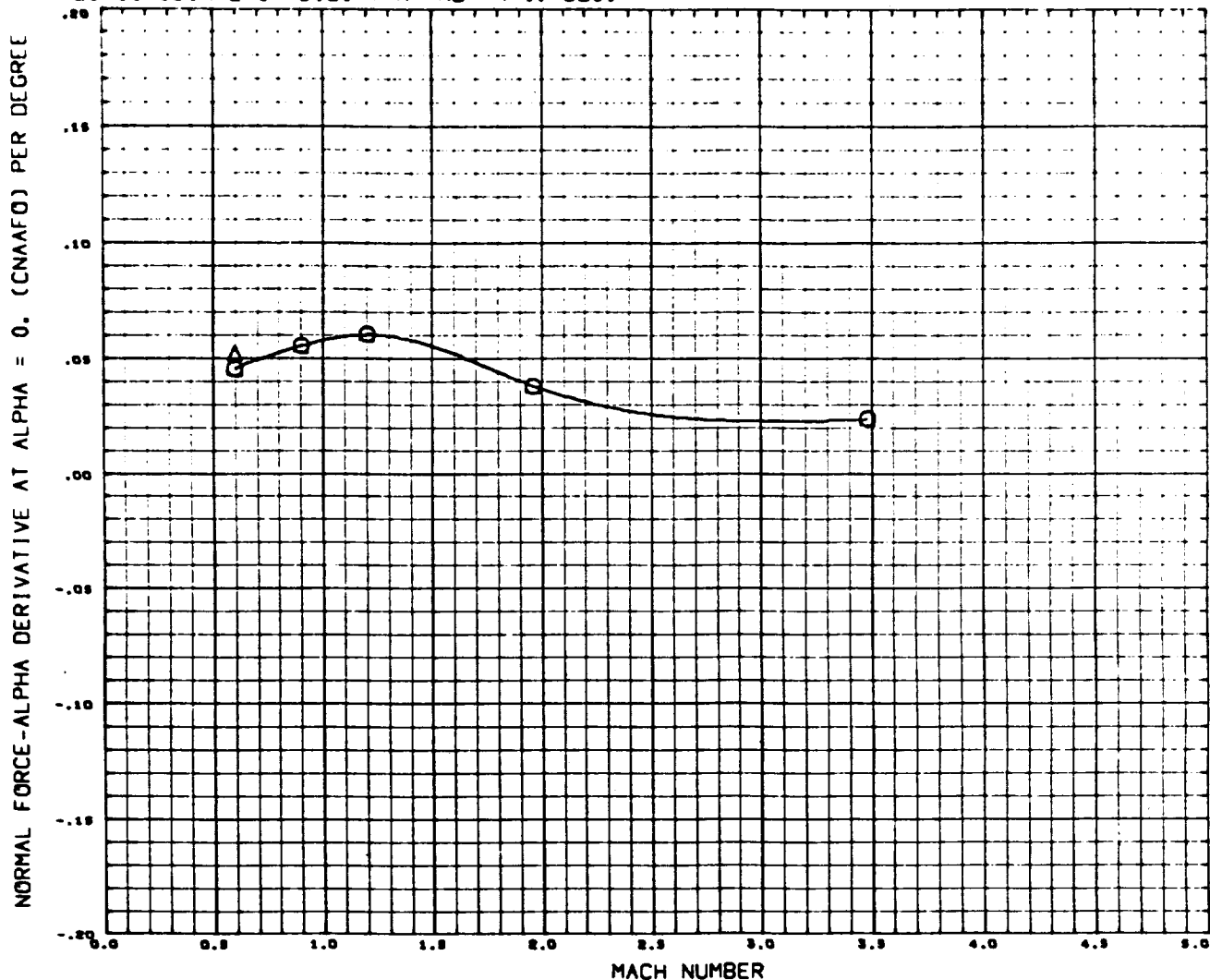
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13023A)	M496-M3FC AR11901-3 MODEL W982V1	0.000	0.000	0.000	0.000	SREF 7.7005 sq.in.
(13024A)	M496-M3FC AR11901-3 MODEL W982C12V1	0.000	0.000	0.000	0.000	LREF 3.1700 in.
						BREF 4.3920 in.
						YMRP 2.4000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



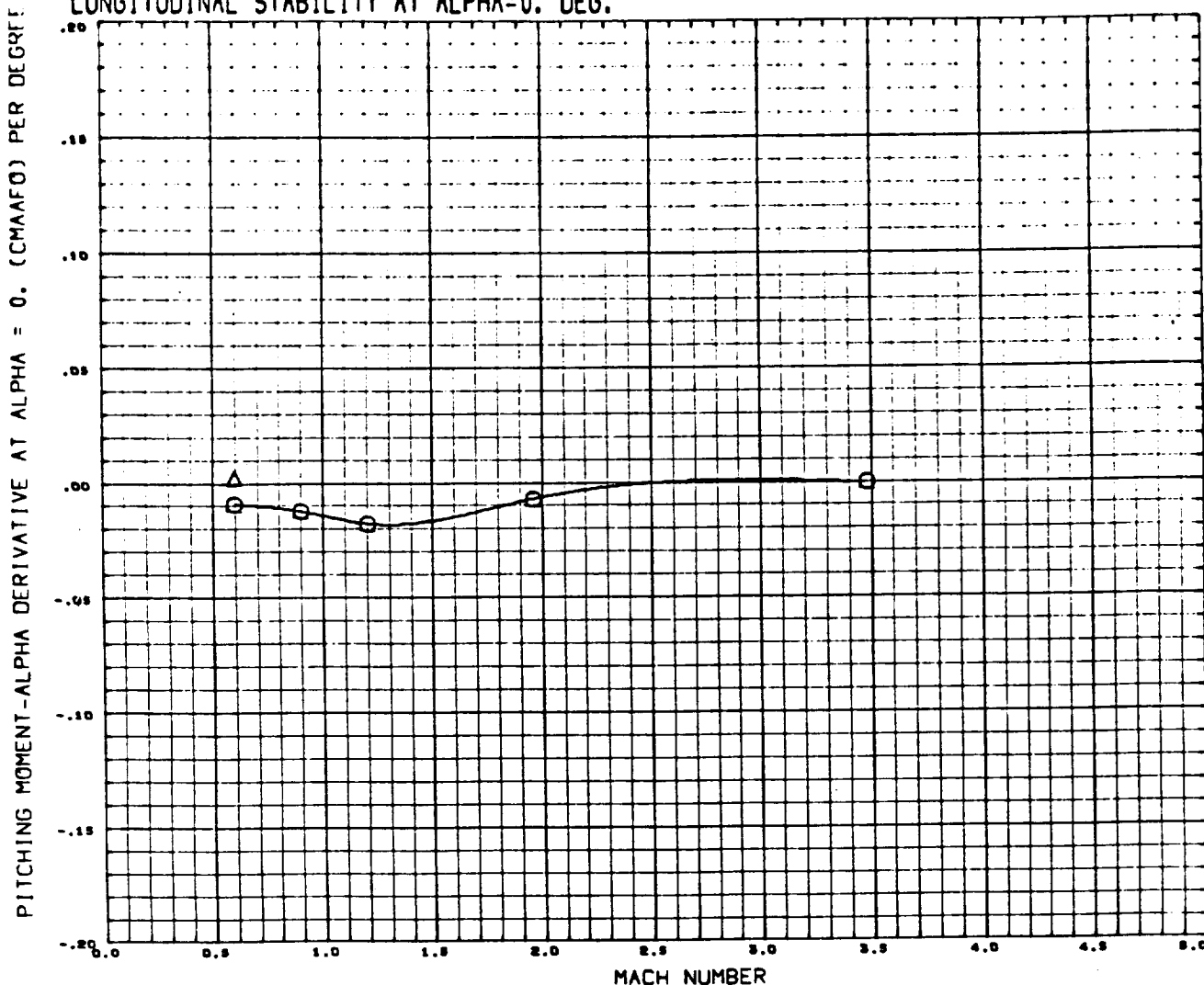
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13823A)	M496-MSFC AR11981-3 MOCEL W882V1	0.000	0.000	0.000	0.000	SREF 7.7005 50. IN.
(13824A)	M496-MSFC AR11981-3 MOCEL W882C12V1	0.000	0.000	0.000	0.000	LREF 3.1700 IN.
						SREF 4.3920 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



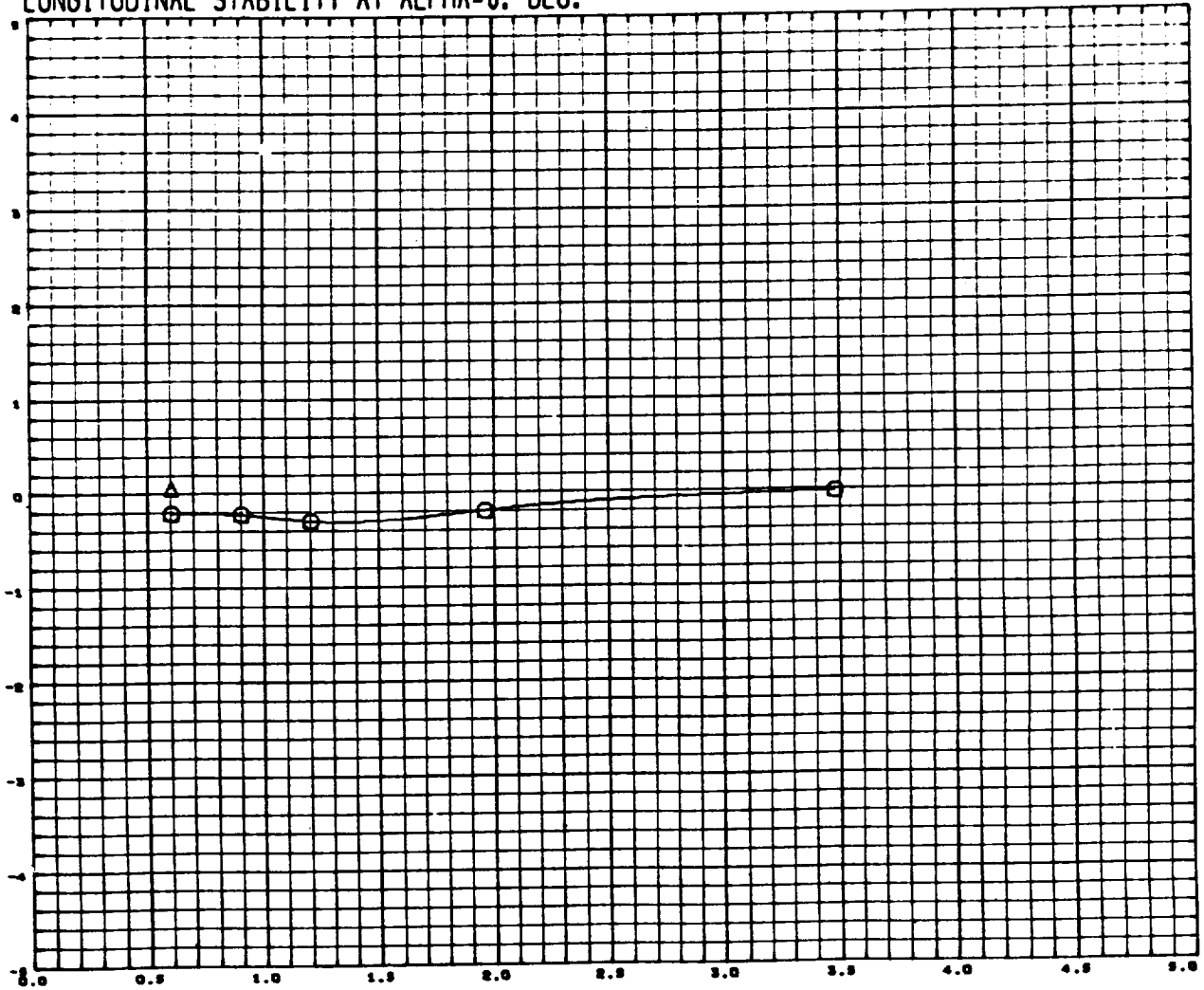
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13023A)	M496-HSFC AR11981-3 MODEL W882V1	0.000	0.000	0.000	0.000	SREF 7.7003 SQ. IN.
(13024A)	M496-HSFC AR11981-3 MODEL W882C12V1	0.000	0.000	0.000	0.000	LREF 3.1700 IN.
						BREF 4.3920 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13023A)	M496-MSFC AR11981-3 MODEL W9B2V1	0.000	0.000	0.000	0.000	BREF 7.7005 80. IN.
(13024A)	M496-MSFC AR11981-3 MODEL W9B2C12V1	0.000	0.000	0.000	0.000	LREF 3.1700 IN.
						BREF 4.3620 IN.
						XNRP 2.4000 IN.
						YNRP 0.0000 IN.
						ZNRP 0.0000 IN.
						SCALE 0.0025

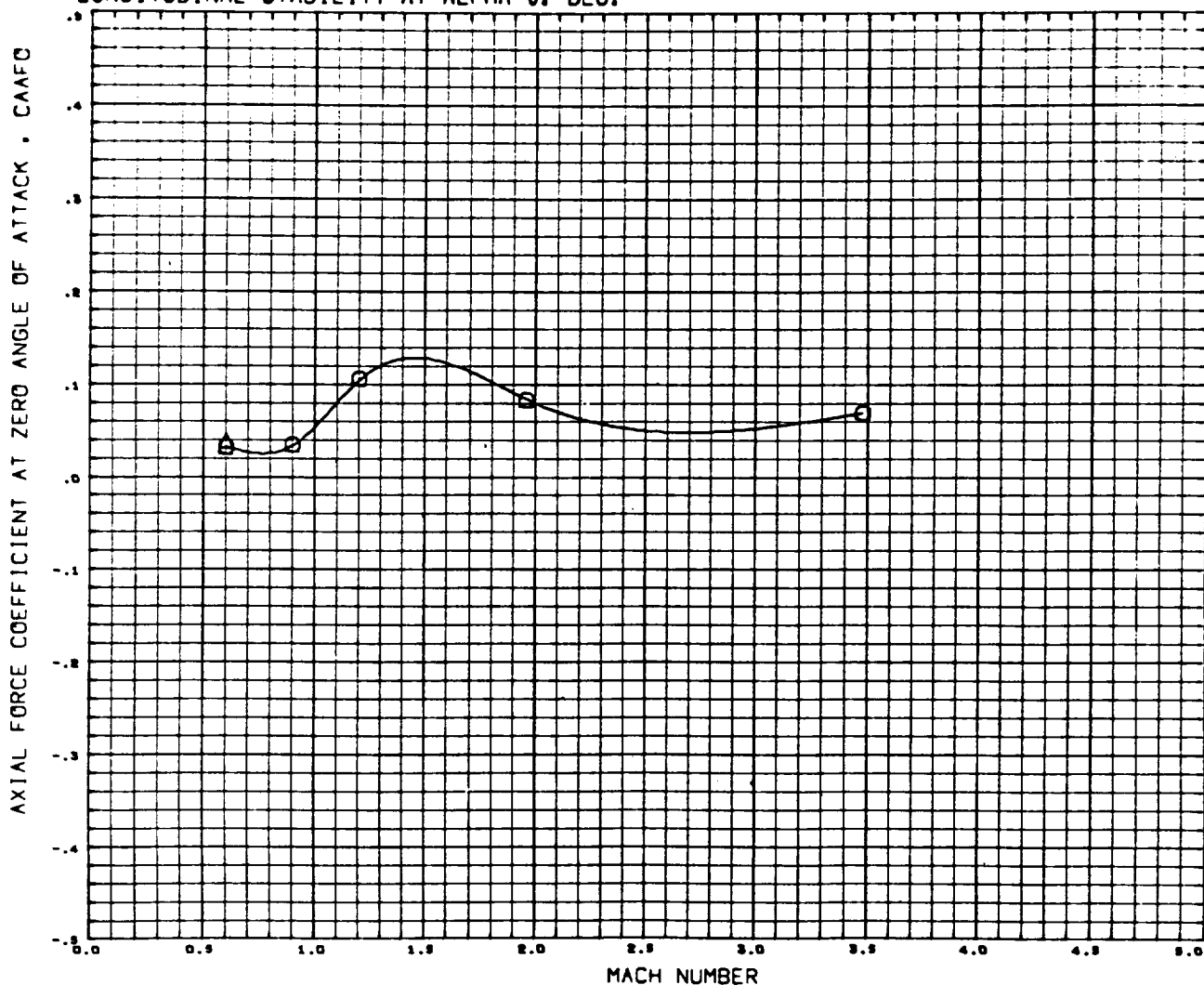
LONGITUDINAL CENTER OF PRESSURE . CP/DI



MACH NUMBER

[illegible]

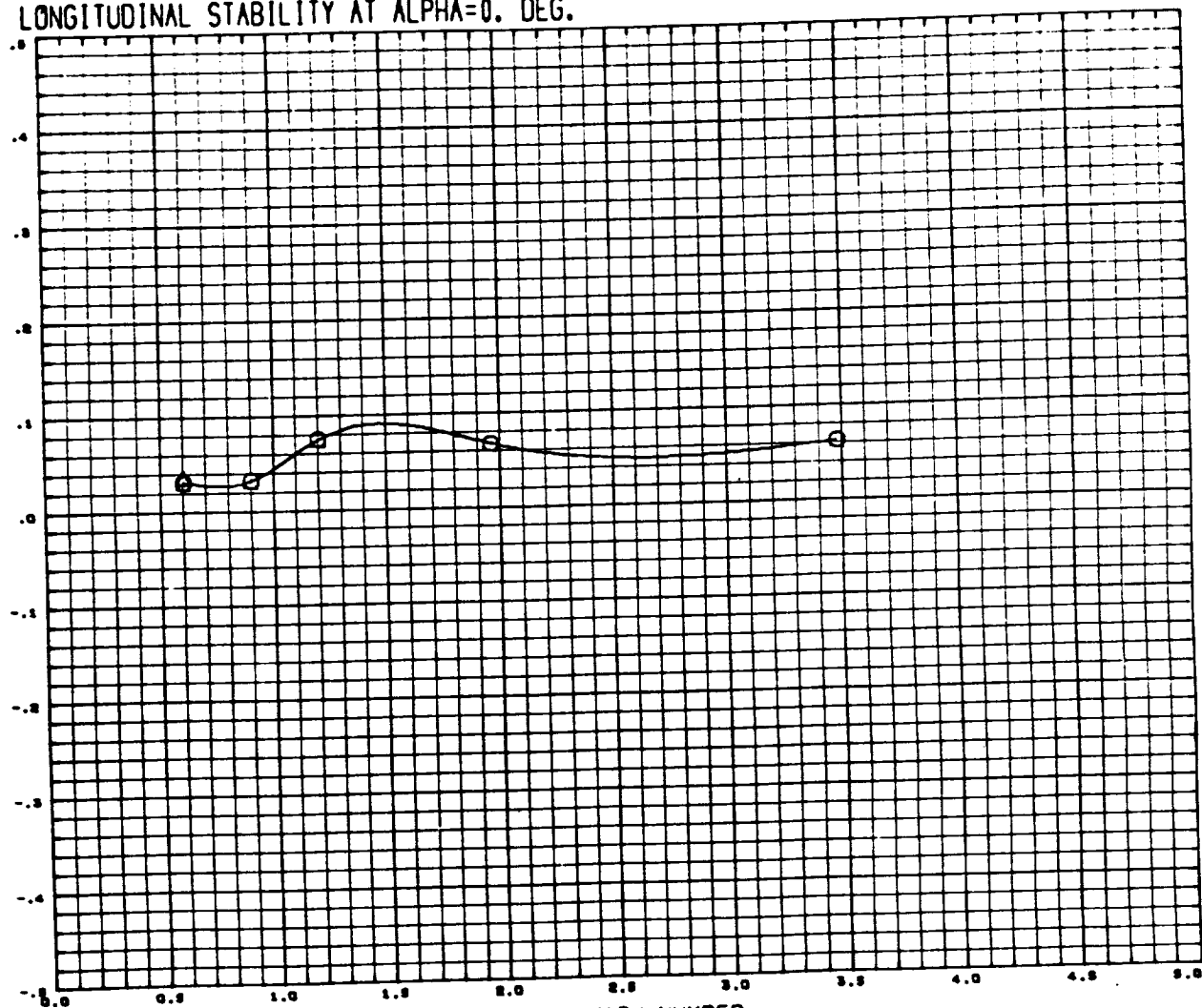
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(13823A)	M496-MSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000		SREF 7.7003 sq.in.
(13824A)	M496-MSFC AR11981-3 MODEL W982C12V1	0.000	0.000	0.000	0.000	LREF 3.1700 in.
						BREF 4.3920 in.
						ZMRP 2.4000 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

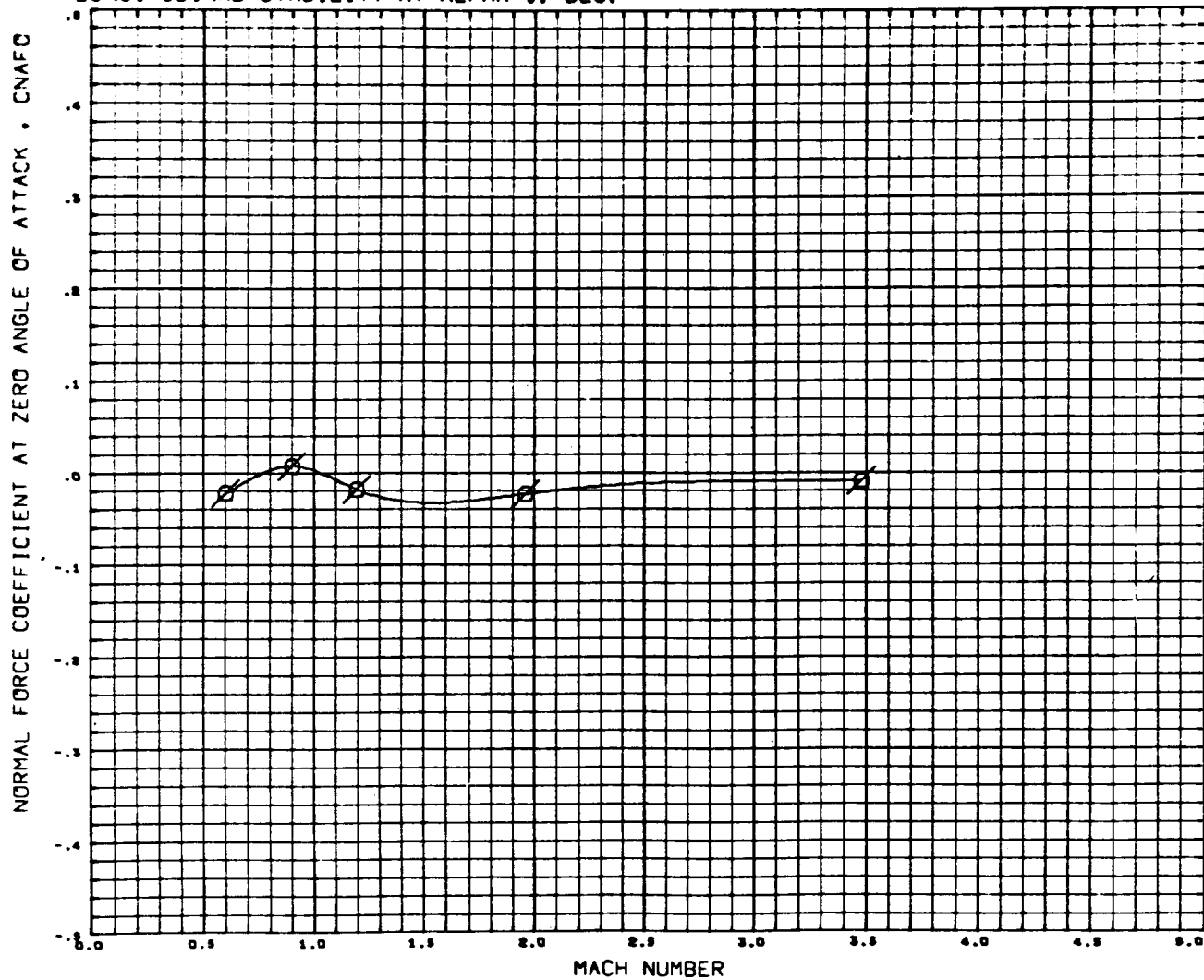
LONGITUDINAL STABILITY AT ALPHA=0. DEG.

FOREBODY AXIAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK • CAFAF0



DATA SET SYMBOL		CONFIGURATION DESCRIPTION				REFERENCE INFORMATION			
(13023A)	Q	M496-MSFC	AR11901-3	MODEL	W982V1	BETA	ELEVTR	AILRON	CANARD
(13024A)	Q	M496-MSFC	AR11901-3	MODEL	W982C12V1	0.000	0.000	0.000	0.000
						SREF	7.7005	50. IN.	
						LREF	3.1700	IN.	
						BREF	4.3920	IN.	
						XHRP	2.4000	IN.	
						YHRP	0.0000	IN.	
						ZHRP	0.0000	IN.	
						SCALE	0.0025	IN.	

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

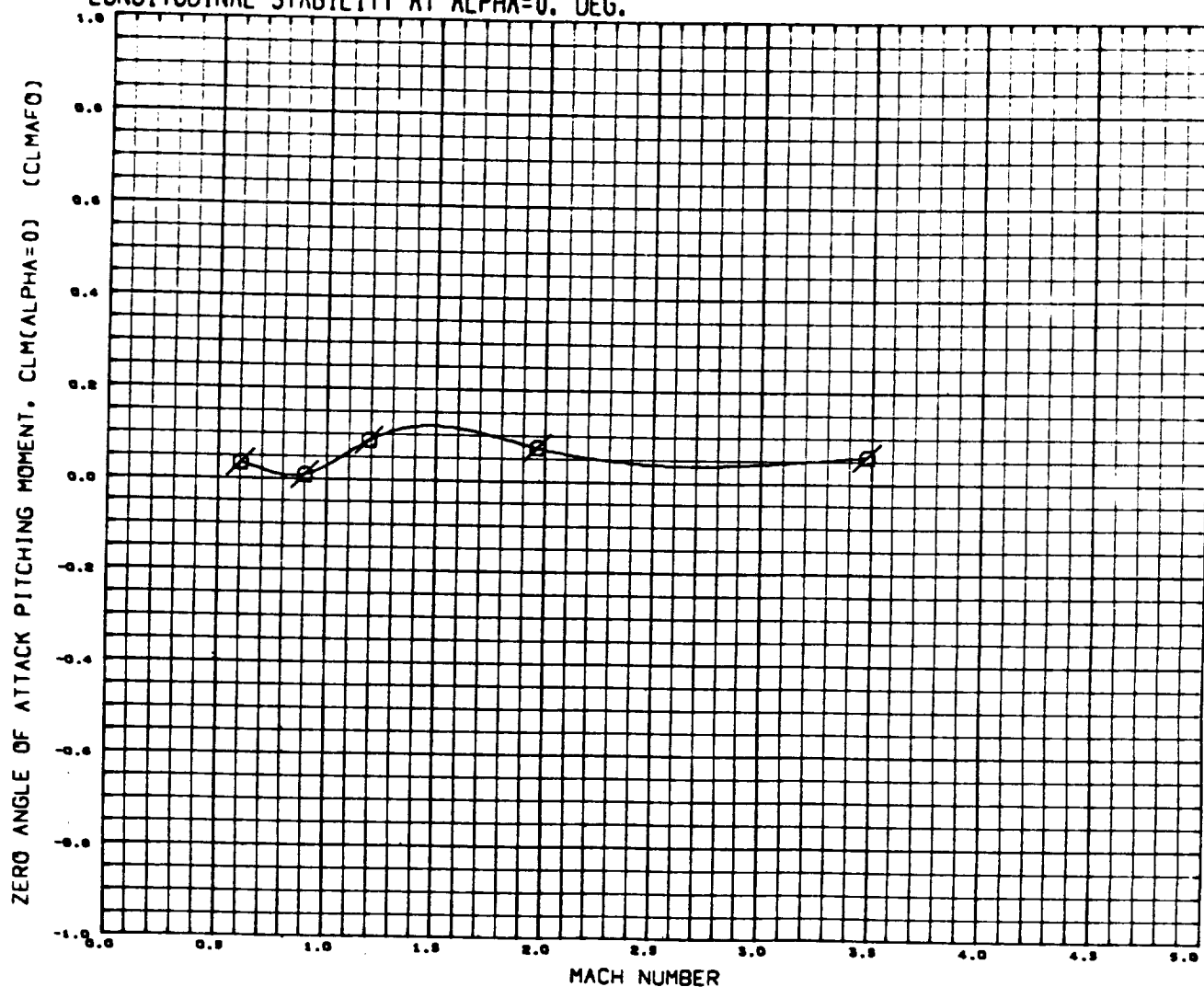


PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
BREF	4.6225	80. IN.
LREF	1.9360	IN.
BREF	4.9000	IN.
XMRP	8.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE 4E*EF

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

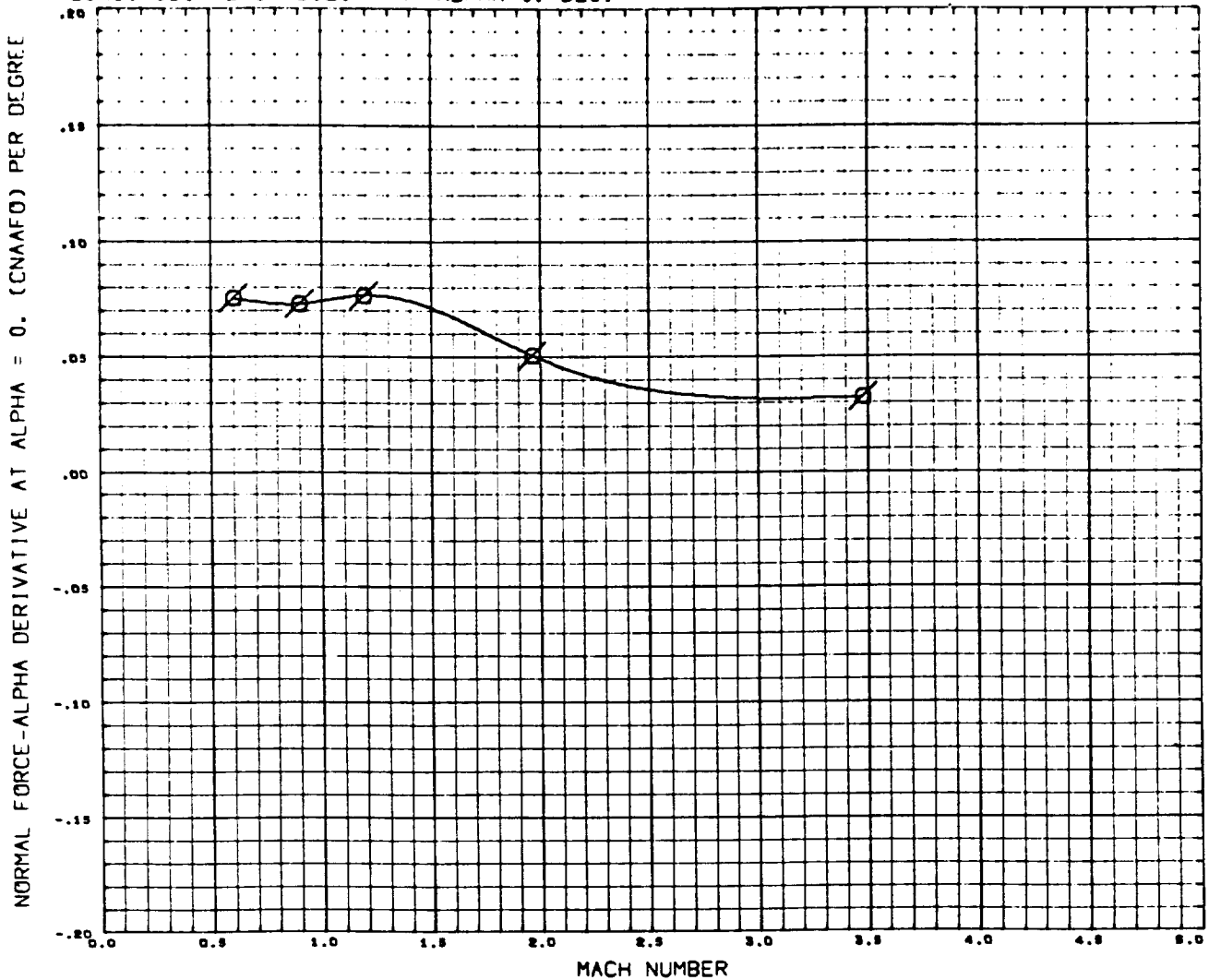


PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREP	4.6225	50. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E*EP

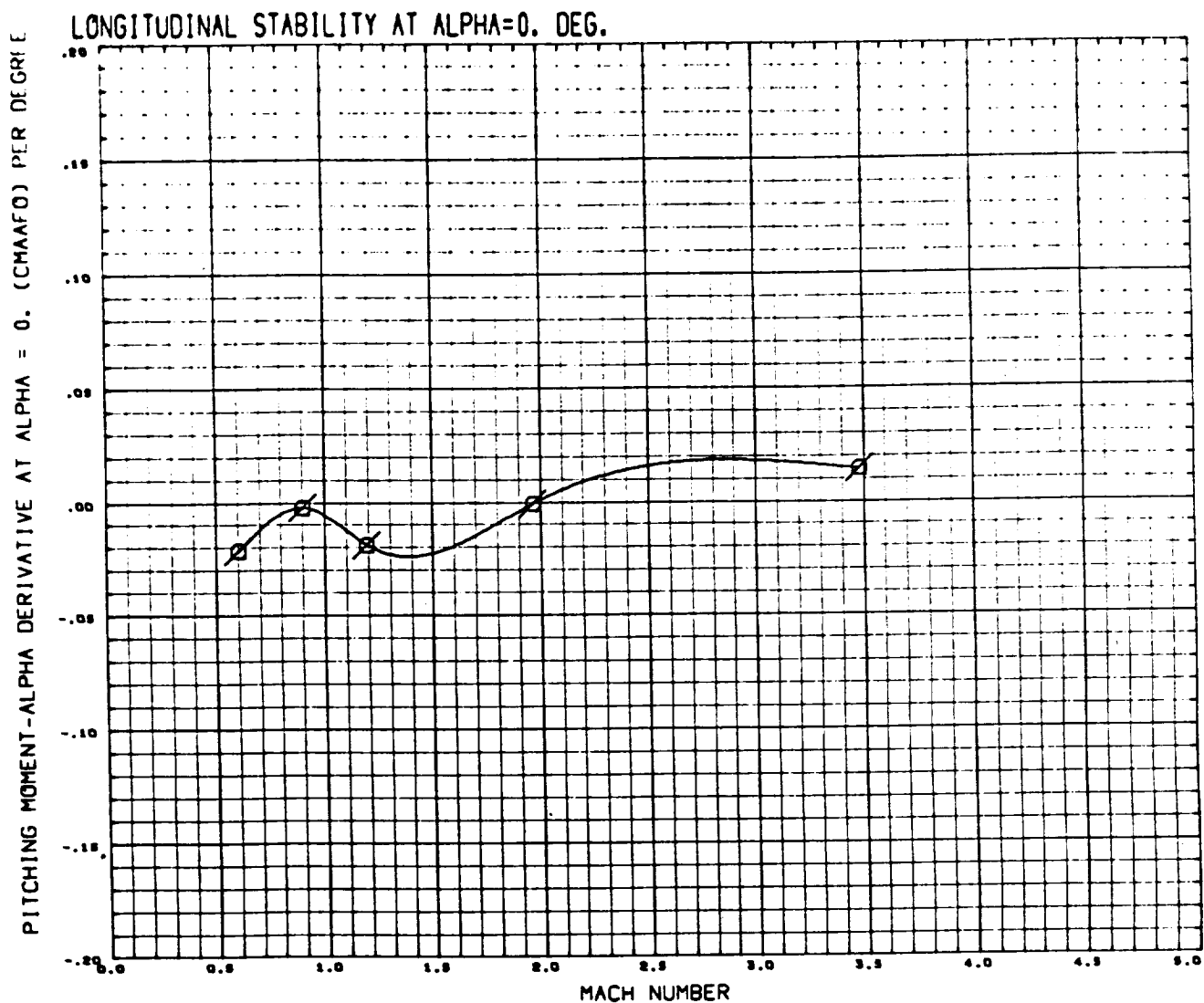
LONGITUDINAL STABILITY AT ALPHA=0. DEG.



PARAMETRIC VALUES
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD 0.000

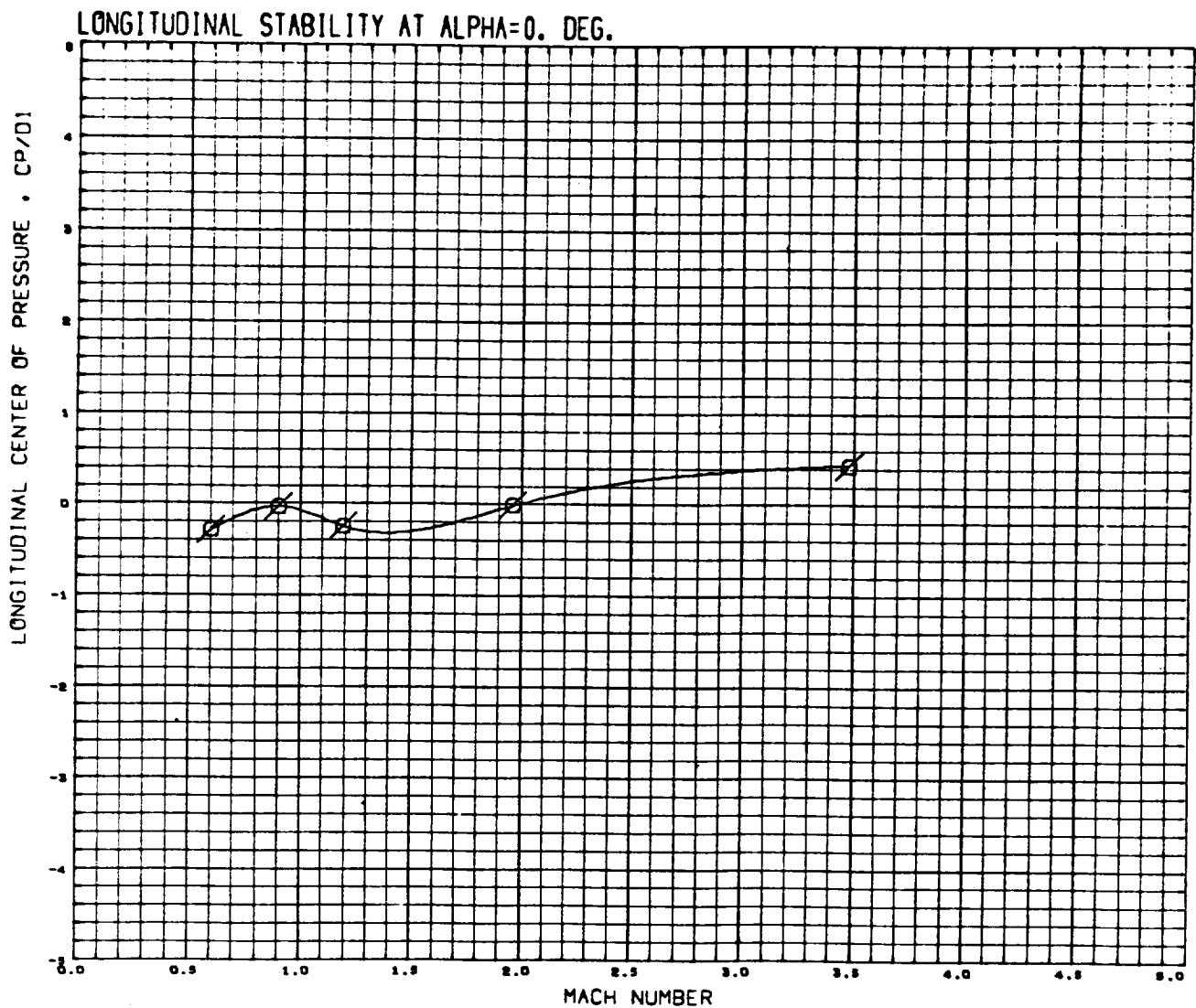
REFERENCE INFORMATION
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 LREF 1.5360 IN.
 QREF 4.3000 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E*EF



PARAMETRIC VALUES				REFERENCE INFORMATION		
BETA	0.000	DEL	0.000	SREF	4.6225	SQ. IN.
DER	0.000	ELEVTR	0.000	LREF	1.5360	IN.
AILRON	0.000	CANARD	0.000	BREF	4.3000	IN.
				XMRP	2.4000	IN.
				YMRP	0.0000	IN.
				ZMRP	0.0000	IN.
				SCALE	0.0025	

DATA HIST. CODE *E*EF



PARAMETRIC VALUES

BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLROM	0.000	CANARD	0.000

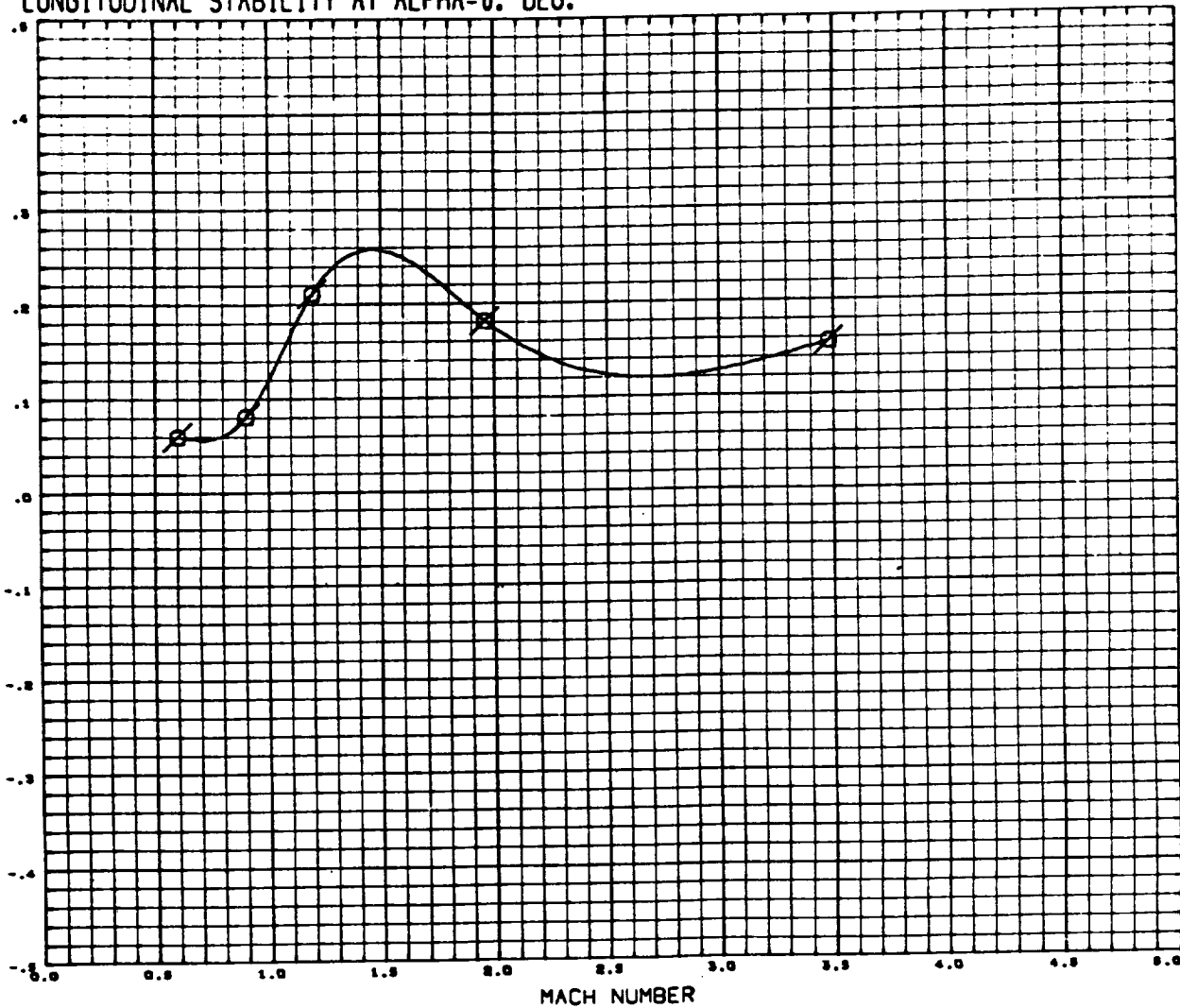
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REFERENCE INFORMATION

SREF	4.0225	SG. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LONGITUDINAL STABILITY AT ALPHA=0. DEG.

AXIAL FORCE COEFFICIENT AT ZERO ANGLE OF ATTACK - CAAFO



PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREP	4.6225	SQ. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E*EF

M496-MSFC

AR11981-3

MODEL

W6HB2C12V2

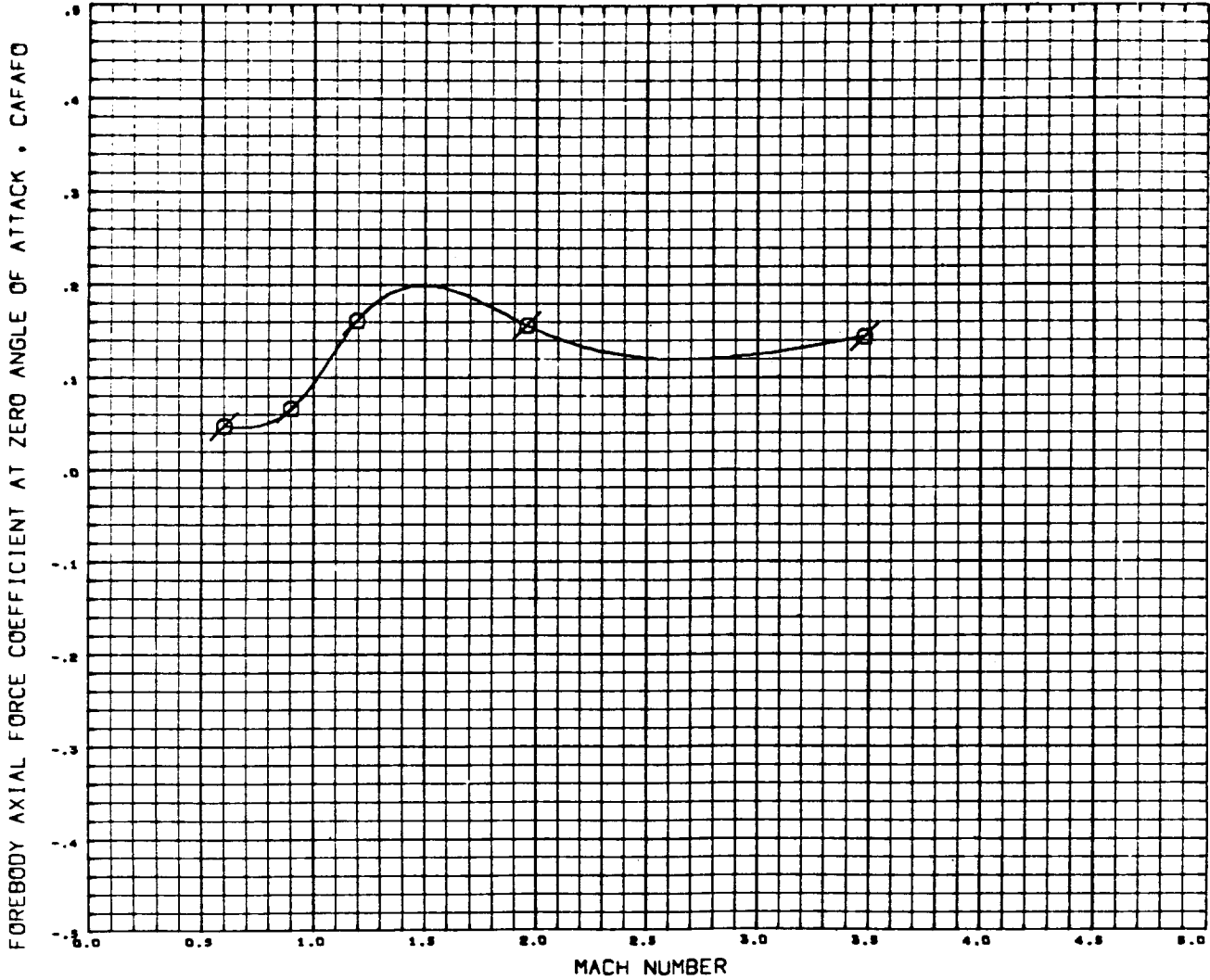
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06 SEP 72

PAGE

556

LONGITUDINAL STABILITY AT ALPHA=0. DEG.



PARAMETRIC VALUES

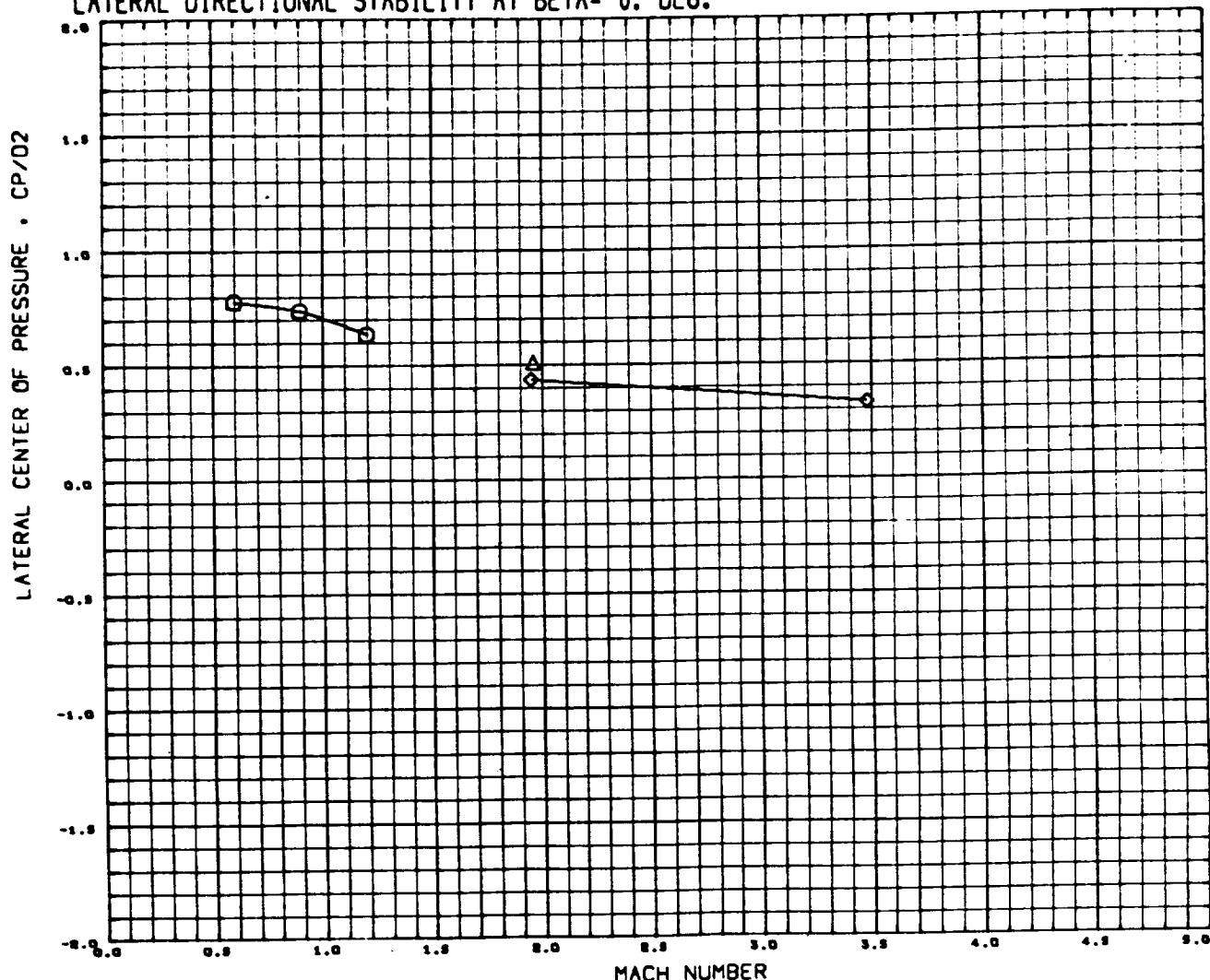
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DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	0.000

REFERENCE INFORMATION

SREF	4.6225	SG. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E*EF

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



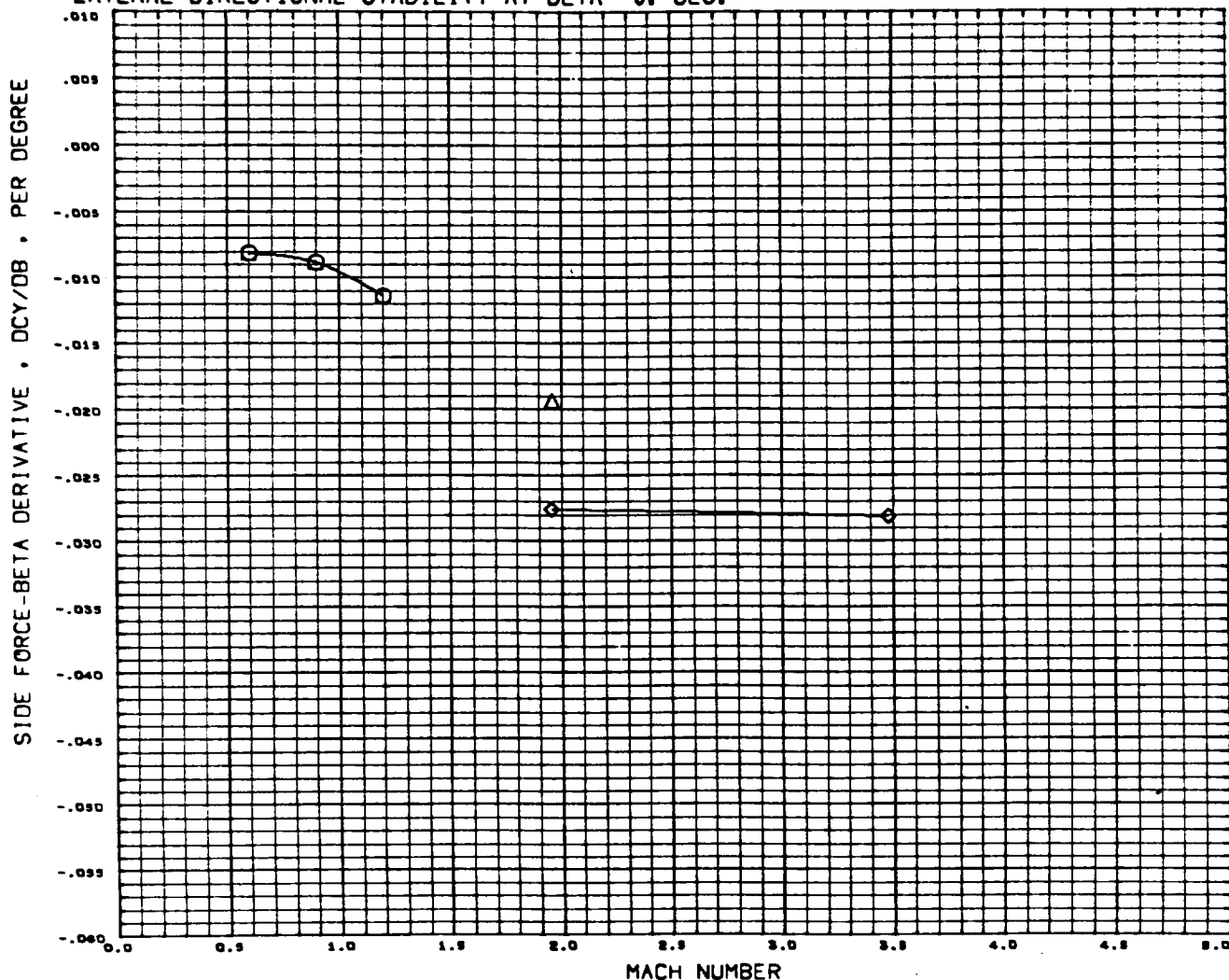
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(138066)	M496-HSFC AR11981-3 MODEL W882
(138064)	M496-HSFC AR11981-3 MODEL W882
(138061)	M496-HSFC AR11981-3 MODEL W882

MACH NUMBER

ALPHA	ATLROM	ELEVTR
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.8225 50. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
YMRP	2.4000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(138086)	M496-HSFC AR11991-3 MODEL
(138084)	M496-HSFC AR11991-3 MODEL
(138061)	M496-HSFC AR11991-3 MODEL

ALPHA	ATLRON	ELEVTR
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XNRP	2.4000 IN.
YNRP	0.0000 IN.
ZNRP	0.0000 IN.
SCALE	0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(139046)	M498-HSFC AR11991-3 MODEL W682
(139048)	M498-HSFC AR11991-3 MODEL W682
(139061)	M498-HSFC AR11991-3 MODEL W682

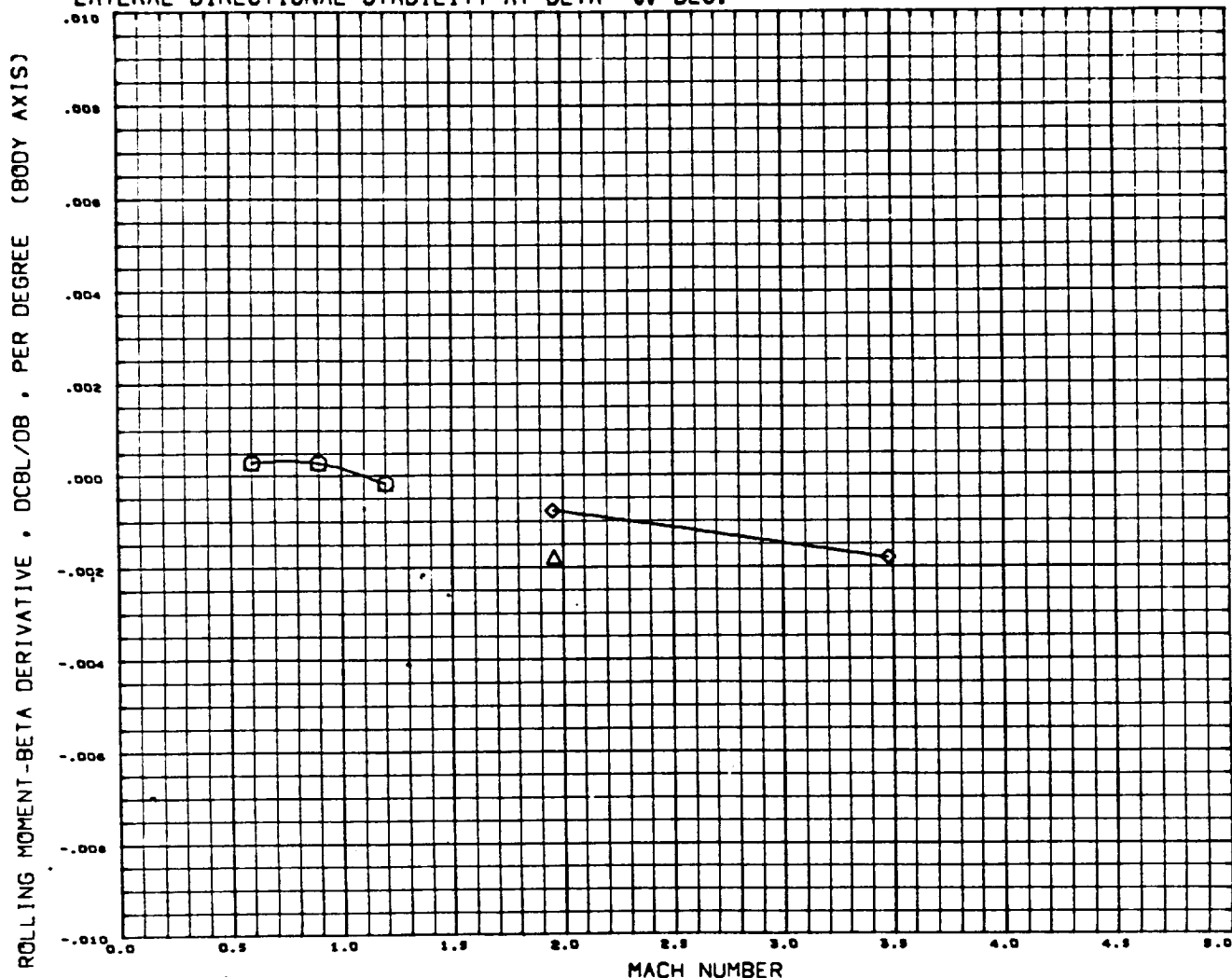
MACH NUMBER

ALPHA	AILRON	ELEVTR
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000

REFERENCE INFORMATION

SREP	4.6225	80. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

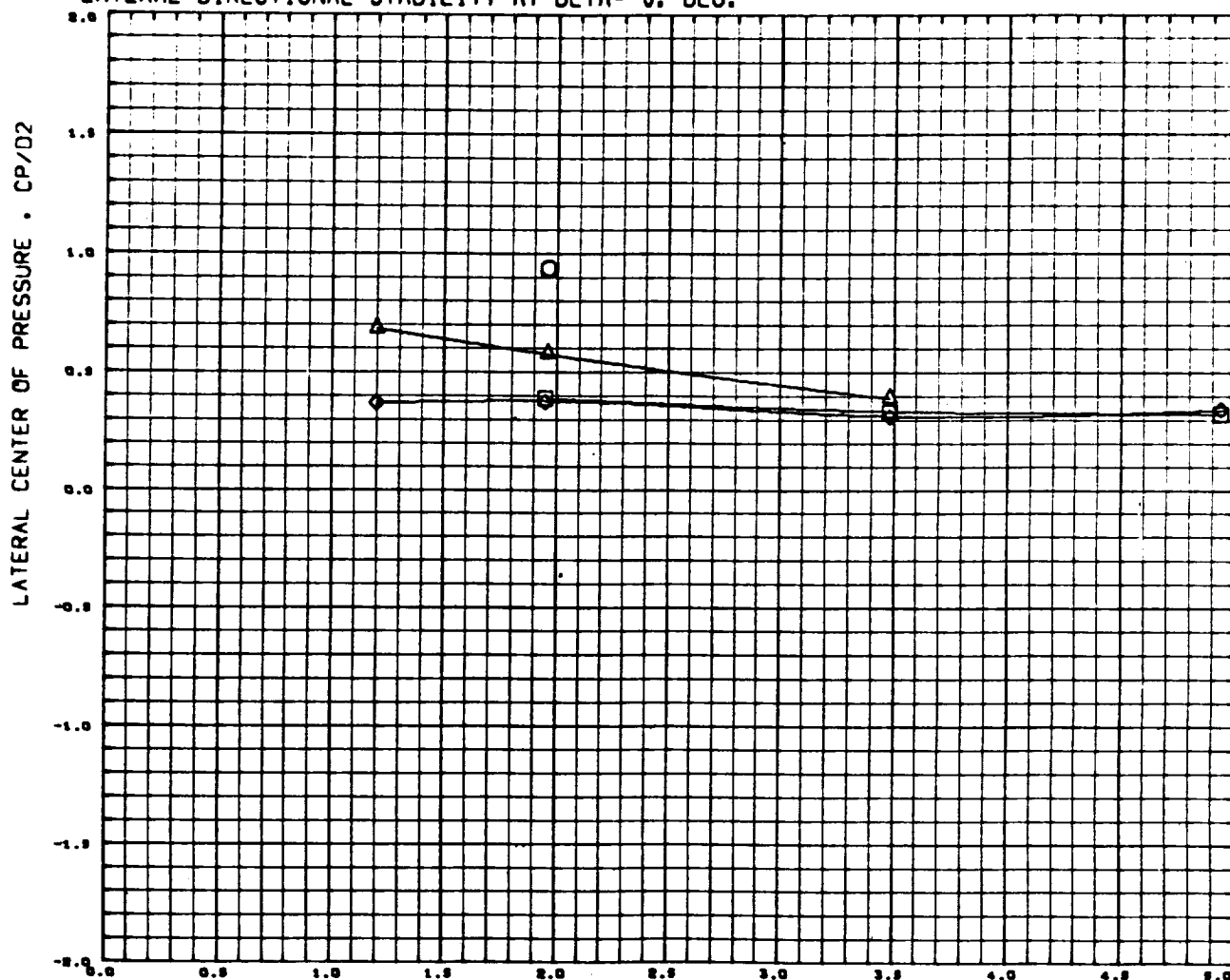


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(13406G)	M496-MSFC AR11981-3 MODEL
(13406H)	M496-MSFC AR11981-3 MODEL
(13406I)	M496-MSFC AR11981-3 MODEL

WBB2	ALPHA	AILRON	ELEVTR
WBB2	10.000	0.000	0.000
WBB2	15.000	0.000	0.000
WBB2	30.000	0.000	0.000

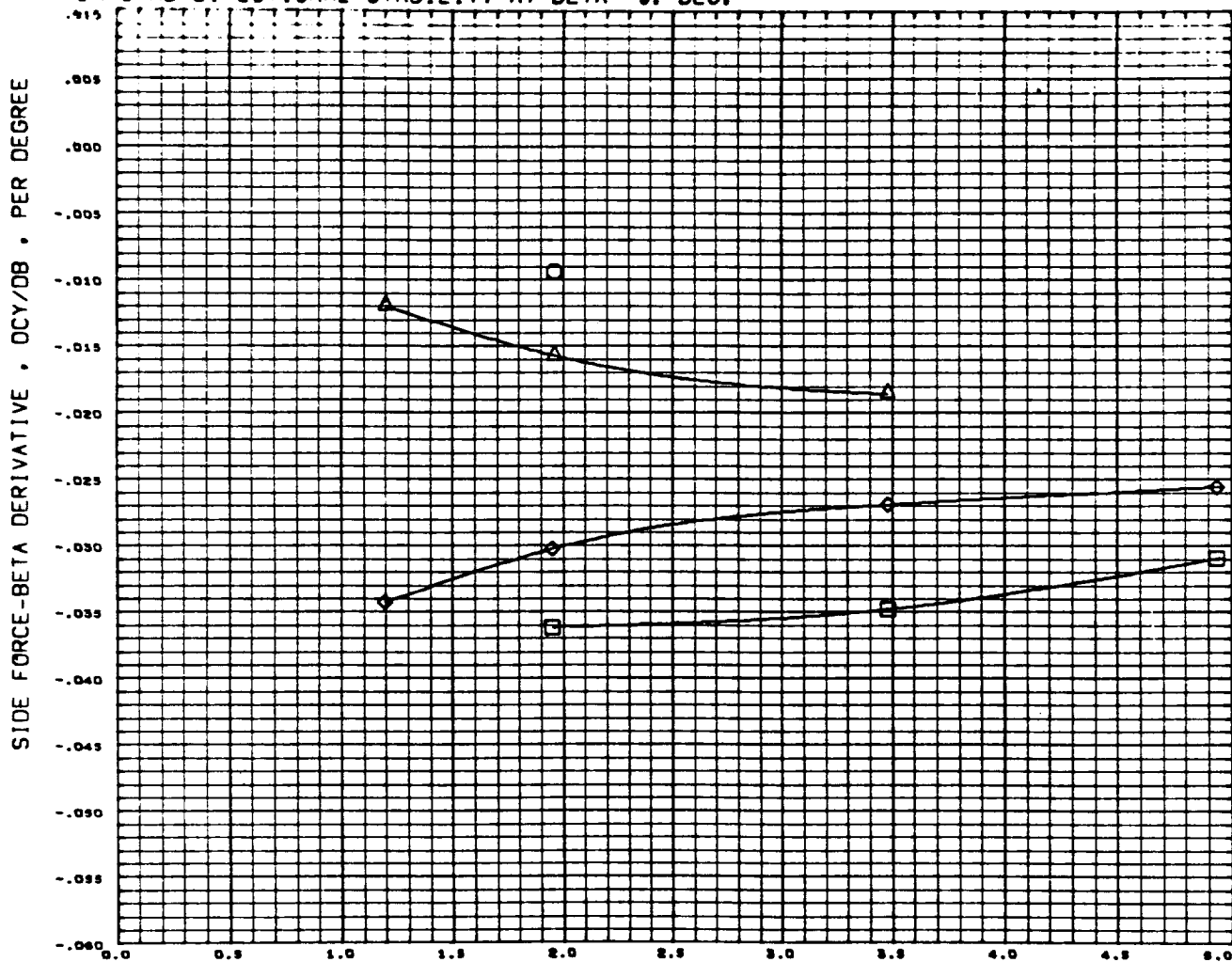
REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13813G)	△	M496-MSFC AR11981-3 MODEL W682C12	10.000	0.000	0.000	0.000	SREF 4.6229 32.1N.
(13814H)	○	M496-MSFC AR11981-3 MODEL W682C12	15.000	0.000	0.000	-20.000	LREF 1.5380 1N.
(13815I)	□	M496-MSFC AR11981-3 MODEL W682C12	30.000	0.000	0.000	-40.000	BREF 4.3000 1N.
(13816J)	□	M496-MSFC AR11981-3 MODEL W682C12	50.000	0.000	0.000	-60.000	XMRP 2.4000 1N.
							YMRP 0.0000 1N.
							ZMRP 0.0000 1N.
							SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13513G)	M496-HSFC AR11981-3 MODEL W6B2C12	10.000	0.000	0.000	0.000	SRFP 4.6225 SQ. IN.
(13514H)	M496-HSFC AR11991-3 MODEL W6B2C12	15.000	0.000	0.000	-20.000	LRFP 1.5360 IN.
(13515I)	M496-HSFC AR11981-3 MODEL W6B2C12	30.000	0.000	0.000	-40.000	BRFP 4.3000 IN.
(13516J)	M496-HSFC AR11991-3 MODEL W6B2C12	50.000	0.000	0.000	-60.000	YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

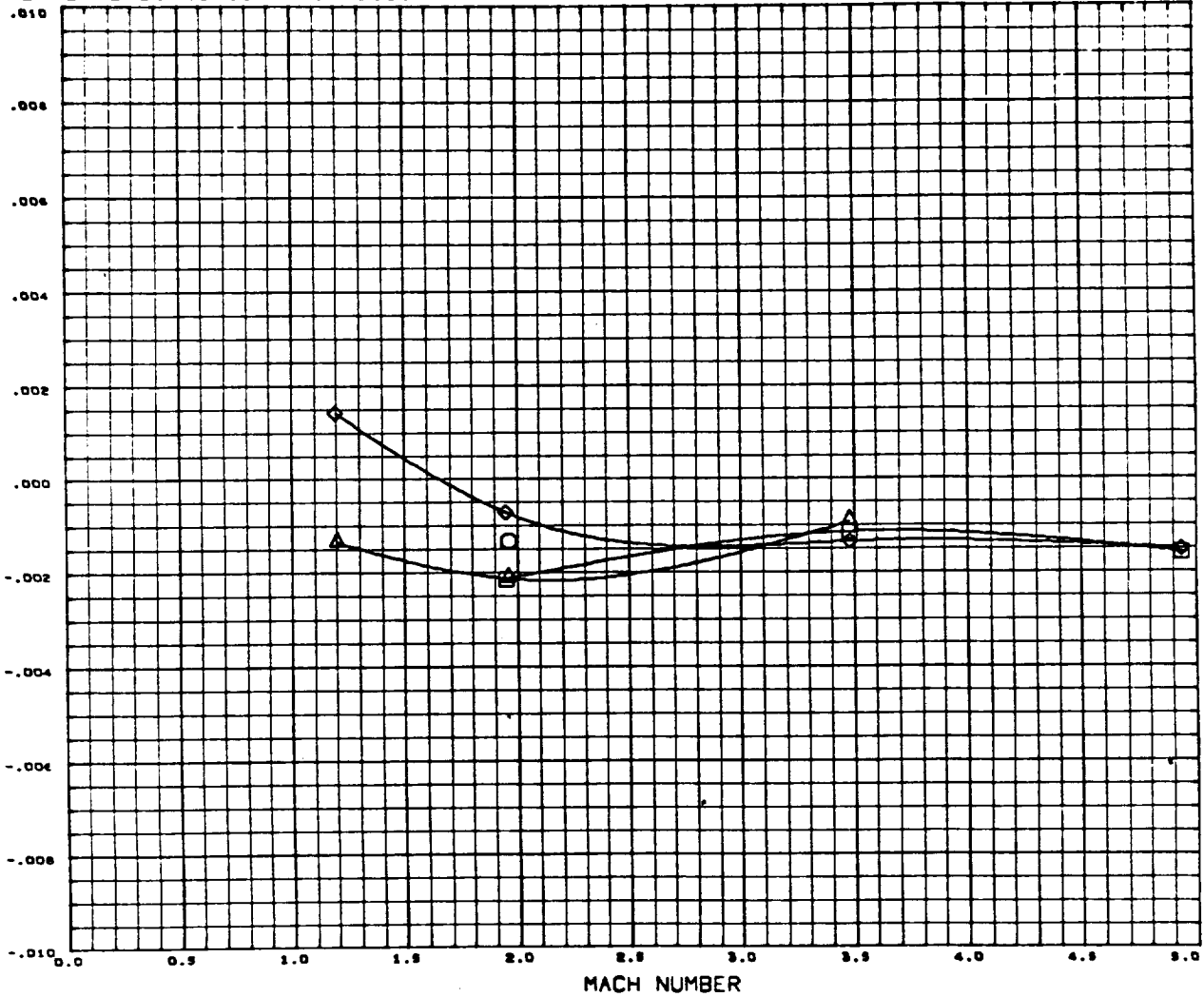
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	CANARD	REFERENCE INFORMATION
(134136)	M496-MSPC AR11991-3 MODEL W8B2C12	10.000	0.000	0.000	0.000	SREF 4.6225 33.1N.
(134144)	M496-MSPC AR11991-3 MODEL W8B2C12	15.000	0.000	0.000	-20.000	LREF 1.5340 1N.
(134151)	M496-MSPC AR11991-3 MODEL W8B2C12	30.000	0.000	0.000	-40.000	BREF 4.3000 1N.
(134167)	M496-MSPC AR11991-3 MODEL W8B2C12	50.000	0.000	0.000	-60.000	XNRP 2.4000 1N.
						YNRP 0.0000 1N.
						ZNRP 0.0000 1N.
						SCALE 0.0025

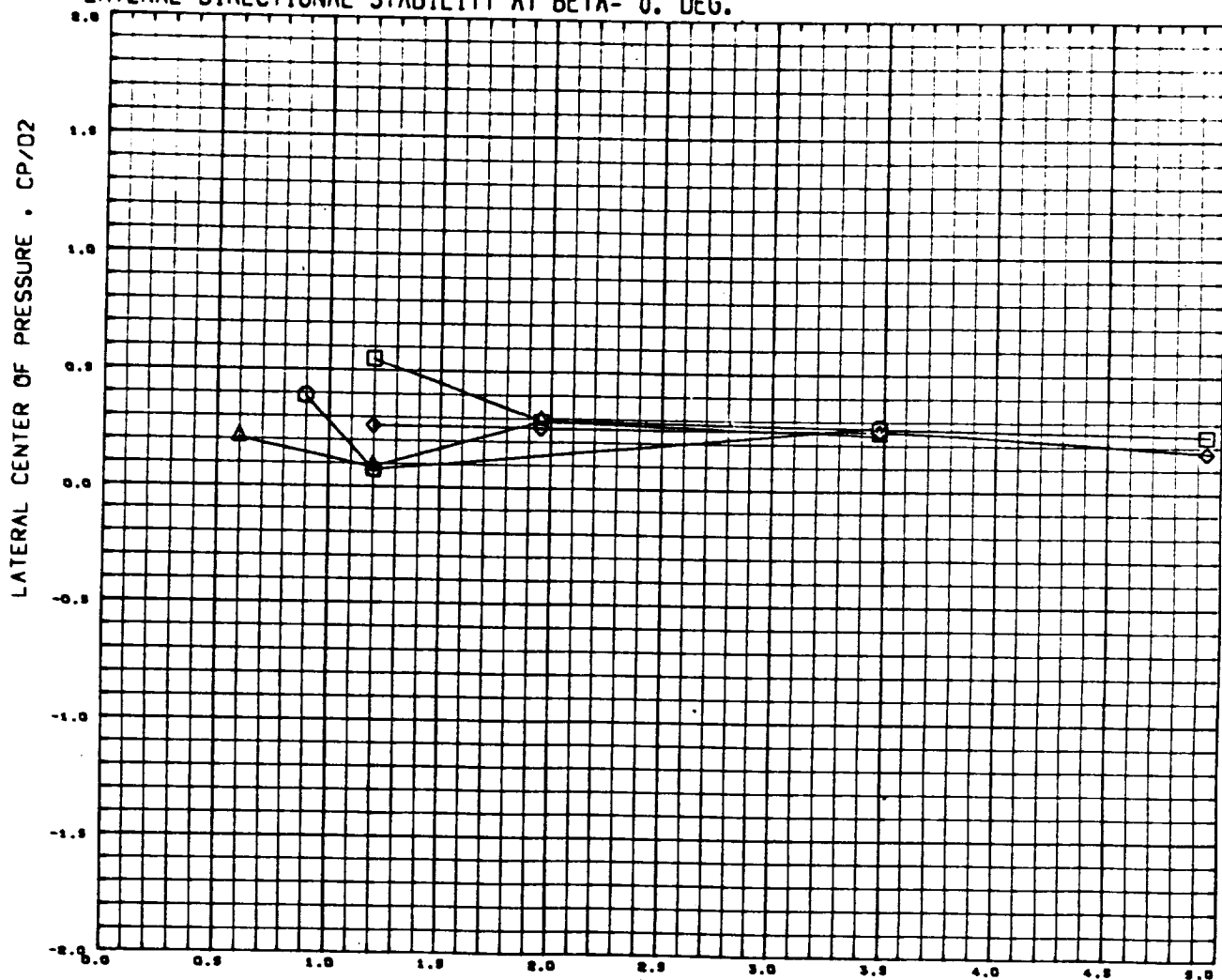
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

ROLLING MOMENT-BETA DERIVATIVE, DCBL/DB, PER DEGREE (BODY AXIS)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLON	ELEVTR	CANARD	REFERENCE INFORMATION
(13913G)	M496-MSFC AR11981-3 W00EL W882C12	10.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13914H)	M496-MSFC AR11981-3 W00EL W882C12	15.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(13915I)	M496-MSFC AR11981-3 W00EL W882C12	30.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(13916J)	M496-MSFC AR11981-3 W00EL W882C12	50.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

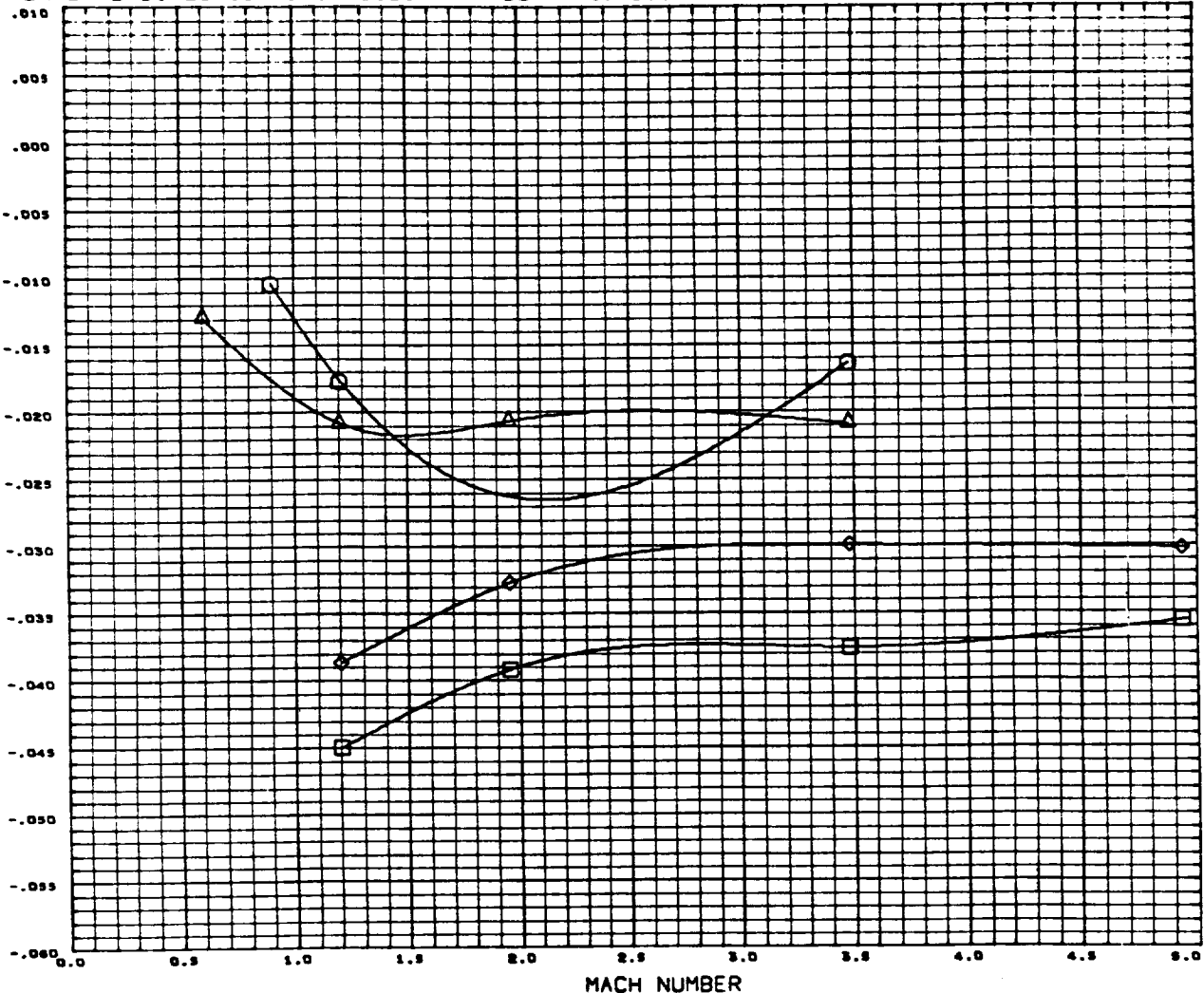
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(138177)	M496-MSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 50. IN.
(138184)	M496-MSFC AR11981-3 MODEL W682C12V2	15.000	0.000	0.000	-20.000	LREF 1.5380 IN.
(138191)	M496-MSFC AR11981-3 MODEL W682C12V2	30.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(138201)	M496-MSFC AR11981-3 MODEL W682C12V2	50.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

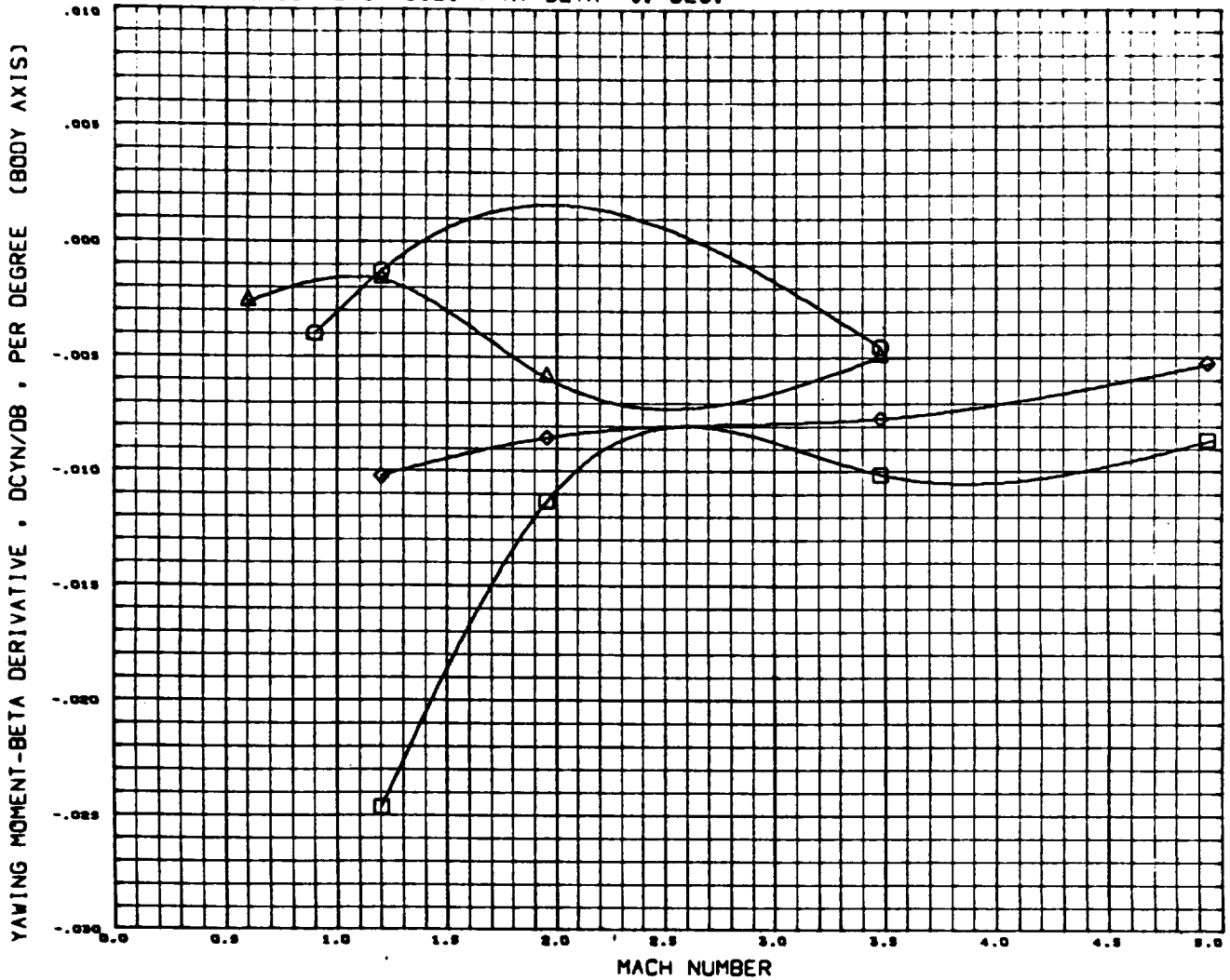
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

SIDE FORCE-BETA DERIVATIVE, DCY/DB, PER DEGREE



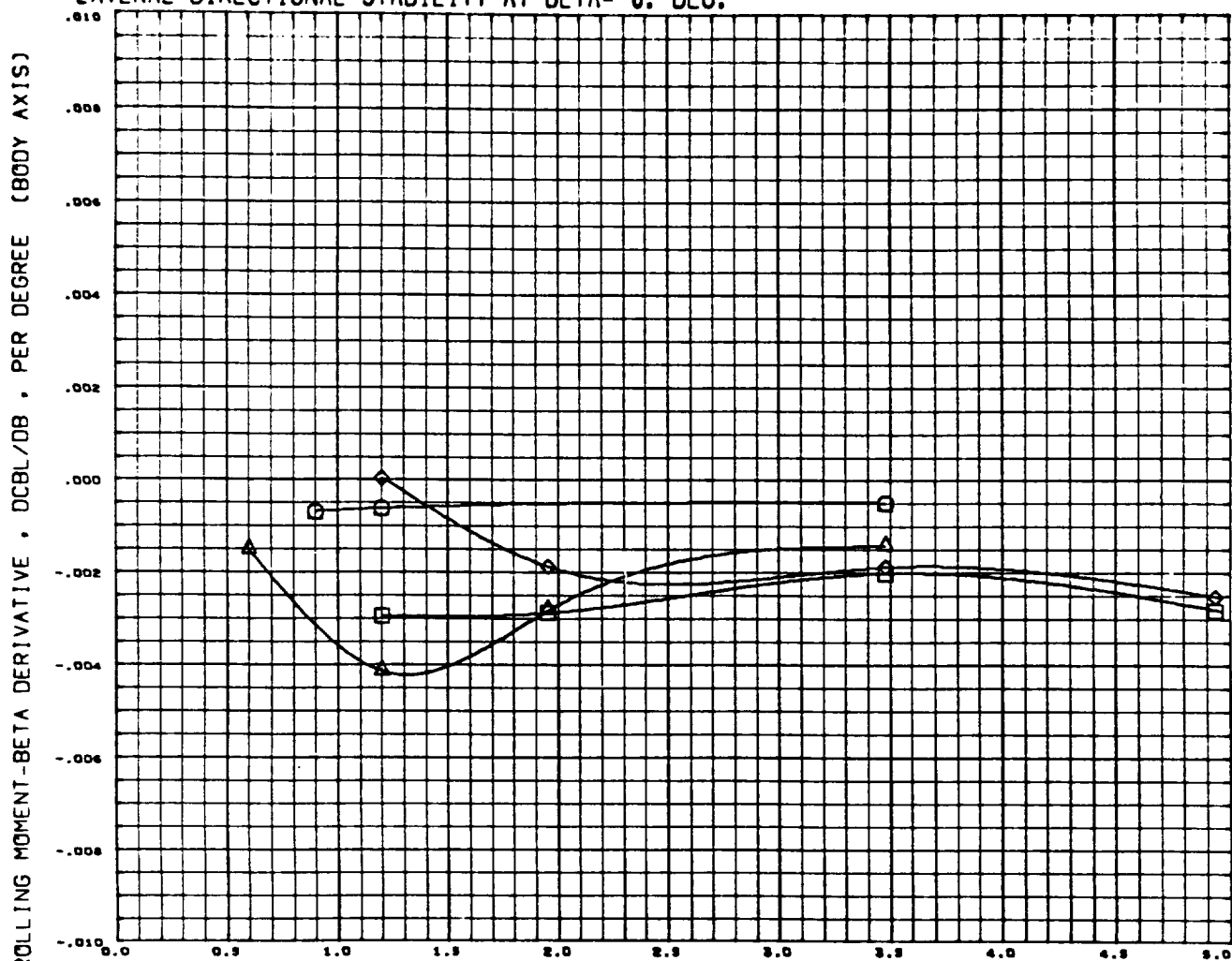
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13917P)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 80.1N.
(13918H)	M496-HSFC AR11981-3 MODEL	15.000	0.000	0.000	-20.000	LREF 1.5360 1N.
(13919I)	M496-HSFC AR11981-3 MODEL	30.000	0.000	0.000	-40.000	BREF 4.3000 1N.
(13920J)	M496-HSFC AR11981-3 MODEL	50.000	0.000	0.000	-60.000	YMRP 2.4000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13017F)	M496-HSFC AR11991-3 MOEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6223 30. IN.
(13018H)	M496-HSFC AR11991-3 MOEL W682C12V2	15.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(13019I)	M496-HSFC AR11991-3 MOEL W682C12V2	30.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(13020J)	M496-HSFC AR11991-3 MOEL W682C12V2	30.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

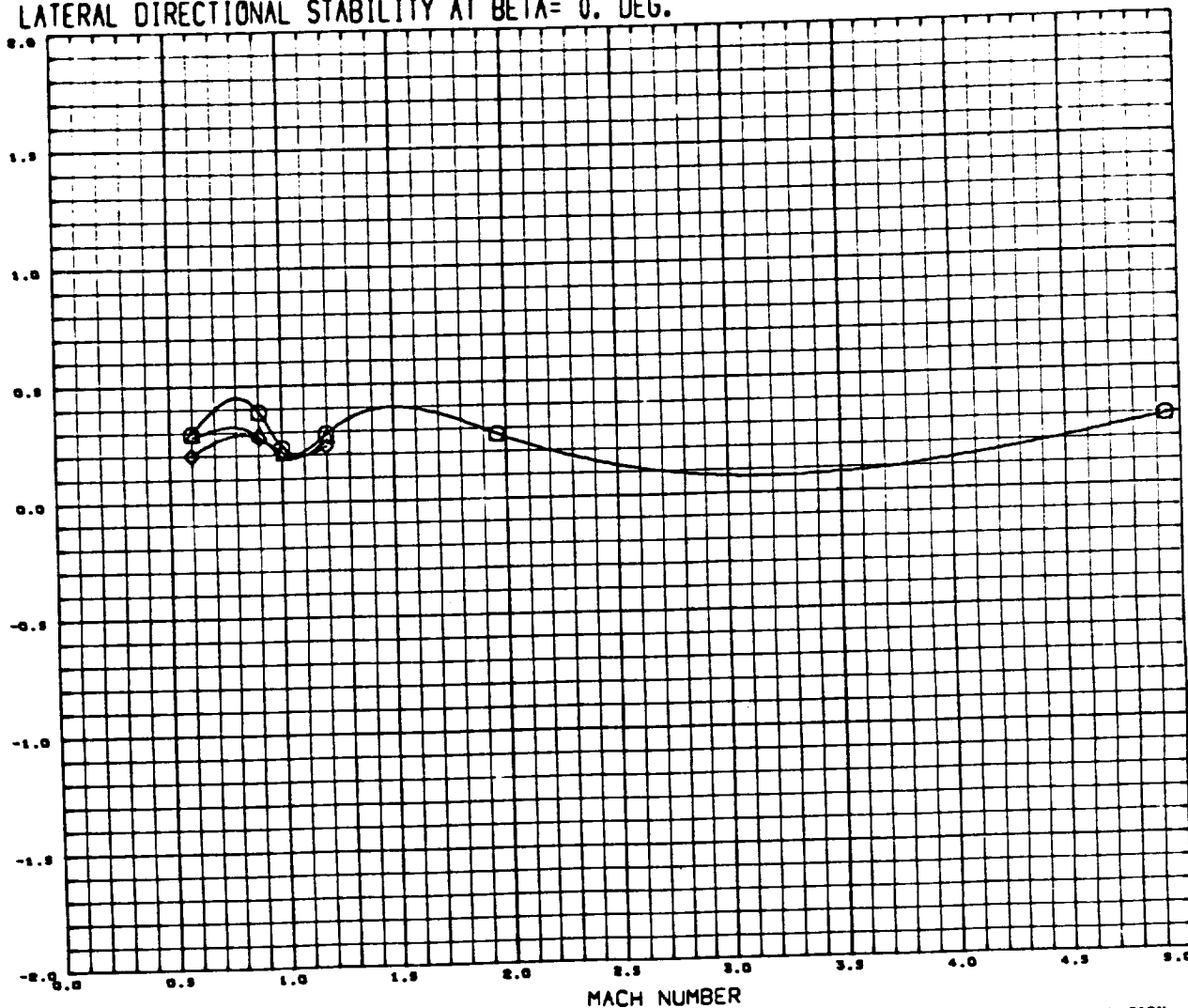
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13917F)	M496-MSFC AR11991-3 MODEL W82C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13919H)	M496-MSFC AR11991-3 MODEL W82C12V2	15.000	0.000	0.700	-20.000	LREF 1.5360 IN.
(13919I)	M496-MSFC AR11991-3 MODEL W82C12V2	30.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(13920J)	M496-MSFC AR11991-3 MODEL W82C12V2	50.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

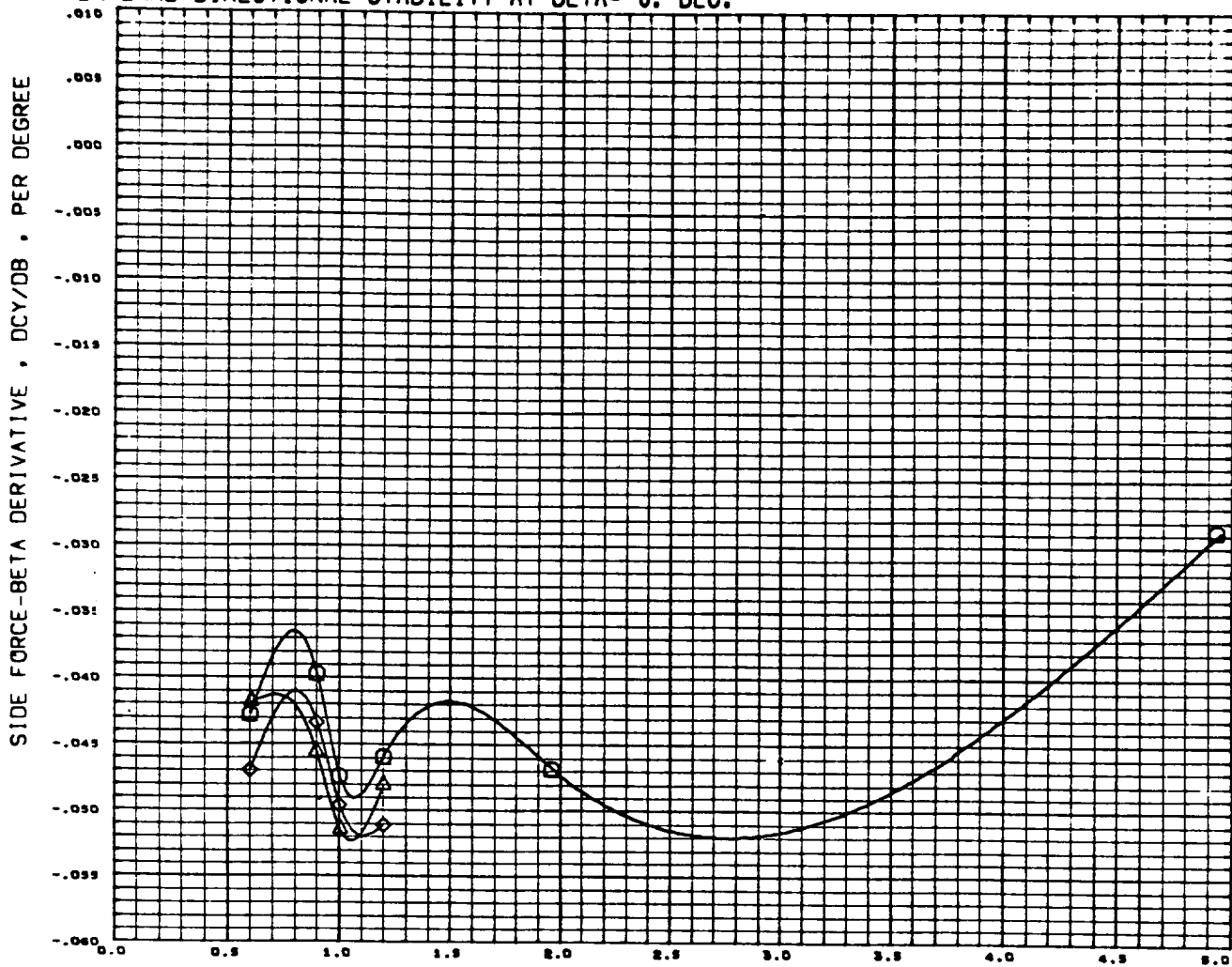
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

LATERAL CENTER OF PRESSURE • CP/O2



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13841F)	M496-N3PC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 33. IN.
(13841G)	M496-N3PC AR11981-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.3360 IN.
(13841L)	M496-N3PC AR11981-3 MODEL	-10.000	0.000	0.000	0.000	BREF 4.3000 IN.
						KHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



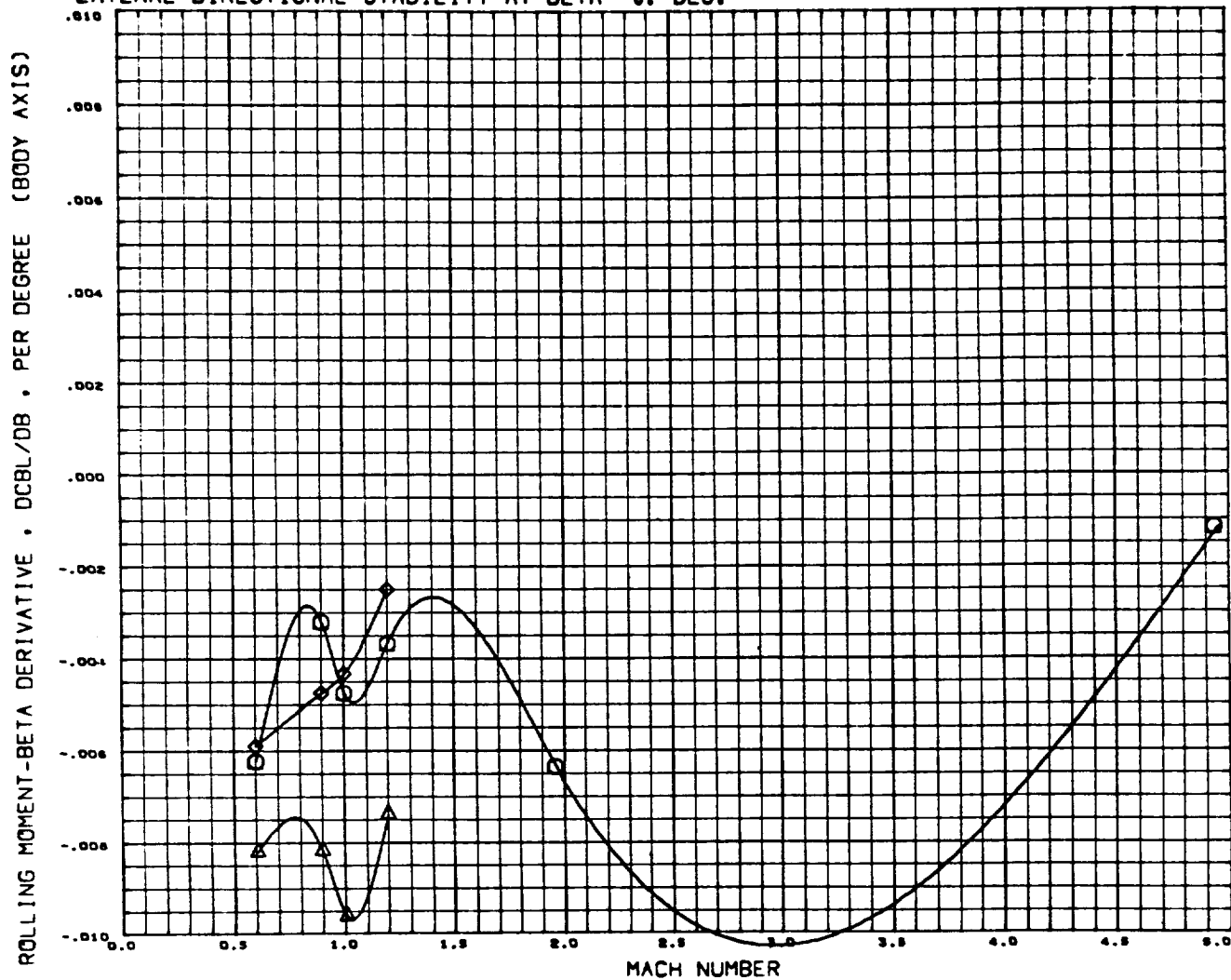
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13441F)	M496-MSFC AR11991-3 WDOEL W622011C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13441G)	M496-MSFC AR11991-3 WDOEL W622011C12V2	10.000	0.000	0.000	0.000	LREF 1.3360 IN.
(13441L)	M496-MSFC AR11991-3 WDOEL W622011C12V2	-10.000	0.000	0.000	0.000	BREF 4.3000 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



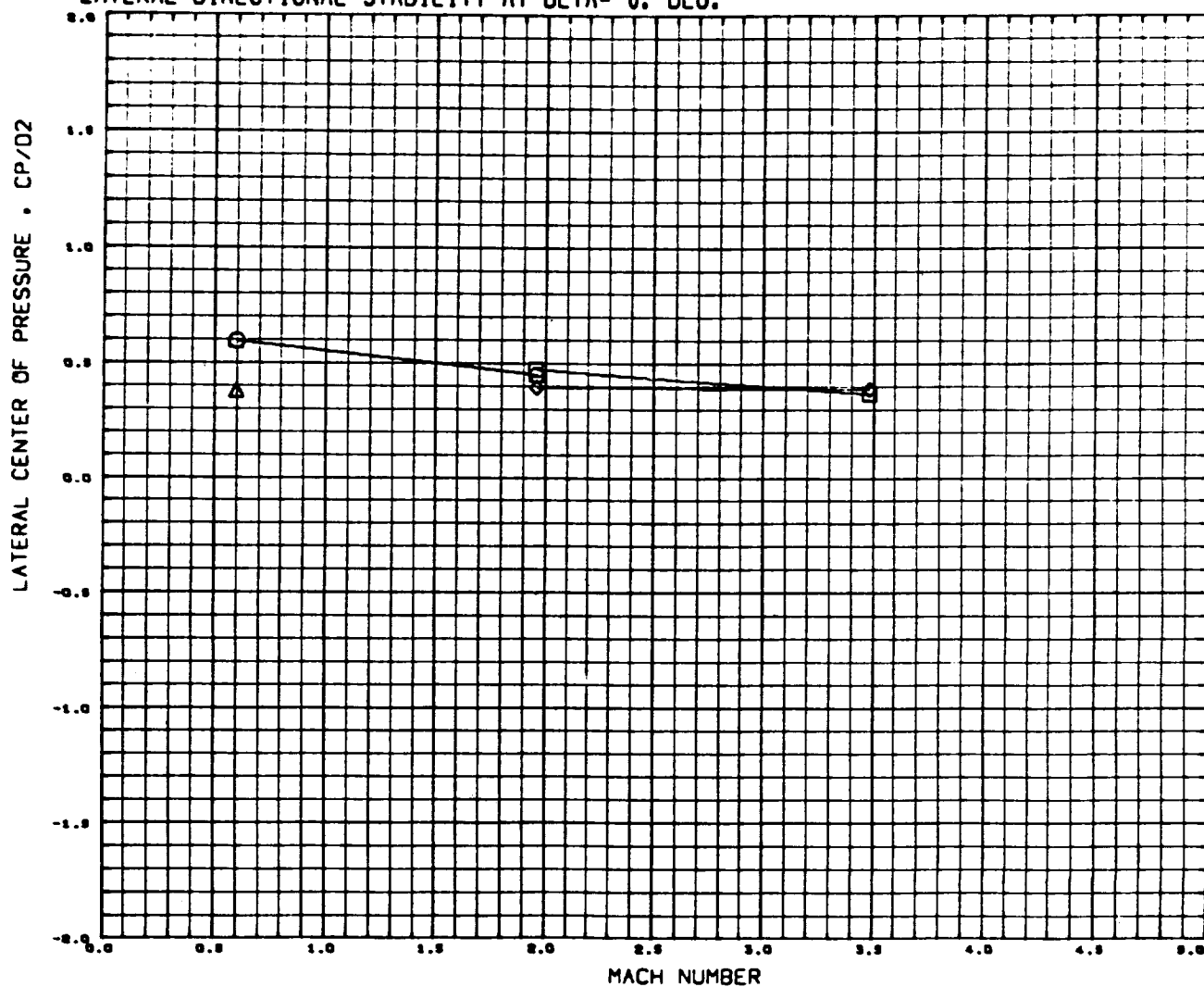
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13041P)	M496-H3PC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 33. IN.
(13041Q)	M496-H3PC AR11981-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.5340 IN.
(13041L)	M496-H3PC AR11981-3 MODEL	-10.000	0.000	0.000	0.000	BREF 4.3000 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG:



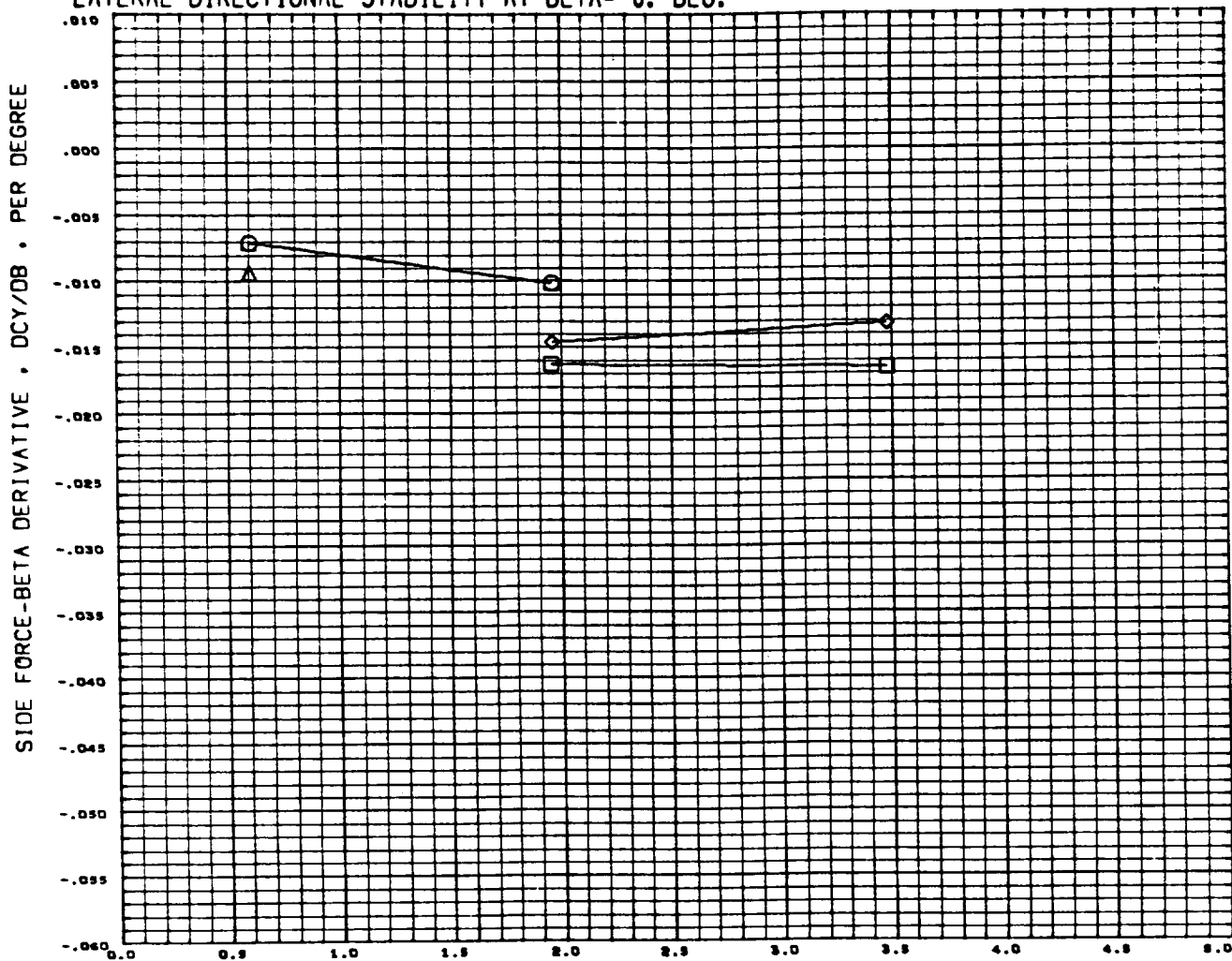
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13941F)	M496-MSFC AR11951-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13941G)	M496-MSFC AR11951-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.9360 IN.
(13941L)	M496-MSFC AR11951-3 MODEL	-10.000	0.000	0.000	0.000	SREF 4.3000 IN.
						XWRP 2.4000 IN.
						YWRP 0.0000 IN.
						ZWRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	REFERENCE INFORMATION
(13822P)	H496-HSFC AR11981-3 WOEEL W882	0.000	0.000	0.000	SREF 7.7005 50. IN.
(13822S)	H496-HSFC AR11981-3 WOEEL W882	10.000	0.000	0.000	LREF 3.1700 IN.
(13822H)	H496-HSFC AR11981-3 WOEEL W882	15.000	0.000	0.000	BREF 4.3920 IN.
(13822I)	H496-HSFC AR11981-3 WOEEL W882	30.000	0.000	0.000	XMRP 2.4000 IN.
					YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



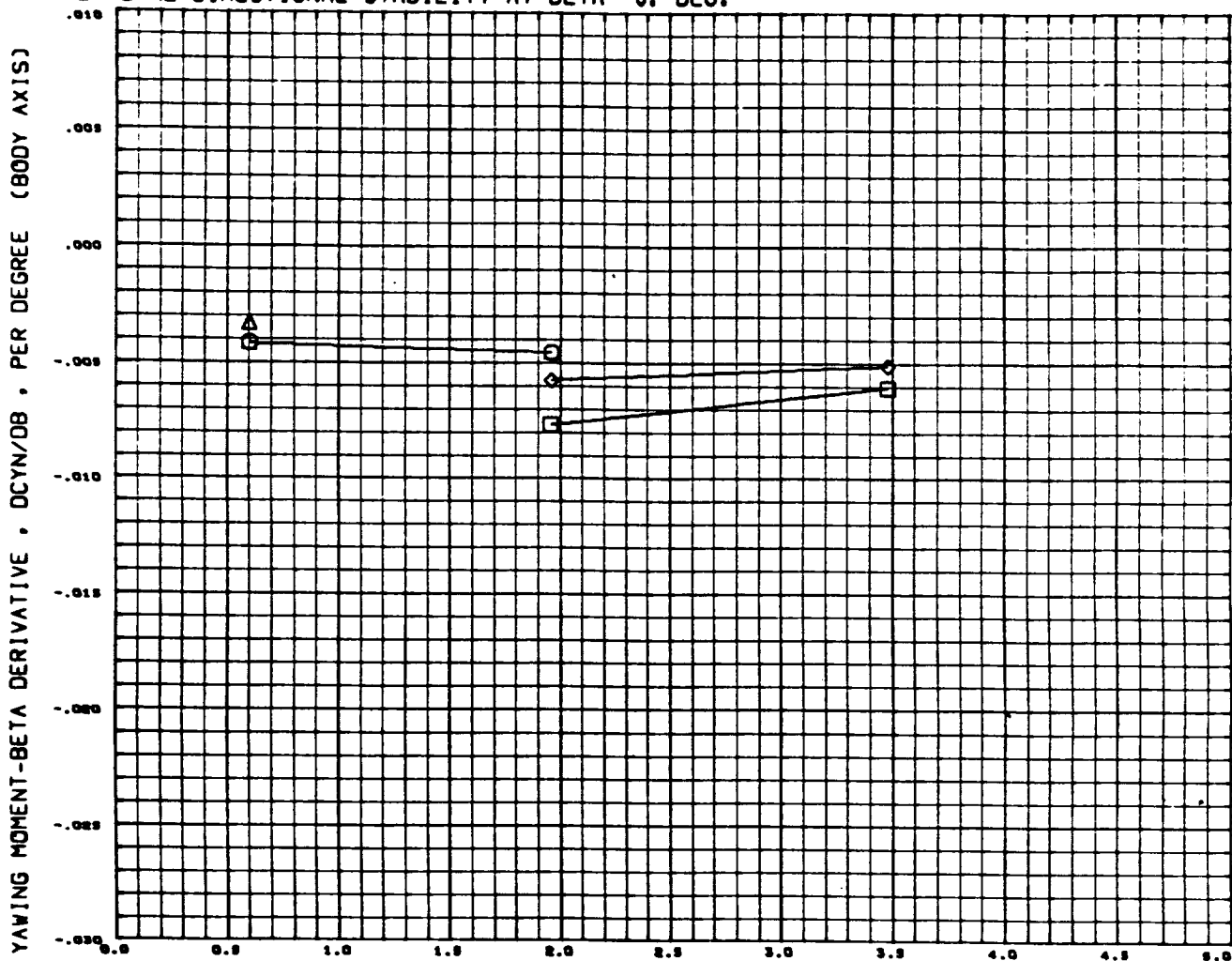
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(13822F)	M496-MSFC AR11991-3 MOEL W982
(13822G)	M496-MSFC AR11991-3 MOEL W982
(13822H)	M496-MSFC AR11991-3 MOEL W982
(13822I)	M496-MSFC AR11991-3 MOEL W982

MACH NUMBER

ALPHA	AILRON	ELEVTR
0.000	0.000	0.000
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000

REFERENCE INFORMATION
SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



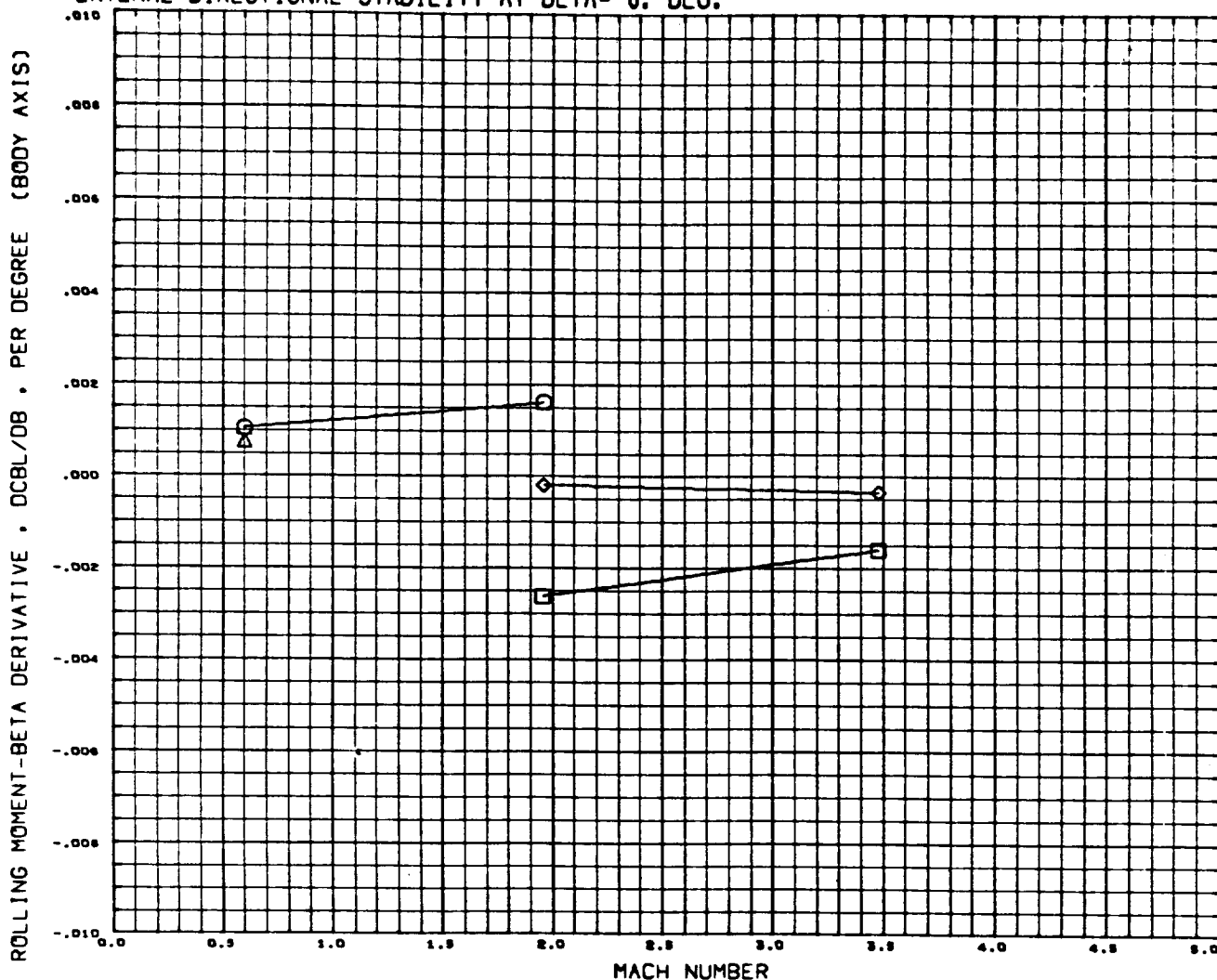
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(13022P)	M496-MSPC AR11991-3 MOEL W982
(13022G)	M496-MSPC AR11991-3 MOEL W982
(13022H)	M496-MSPC AR11991-3 MOEL W982
(13022I)	M496-MSPC AR11991-3 MOEL W982

MACH NUMBER

ALPHA	ATLRON	ELEVTR
0.000	0.000	0.000
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000

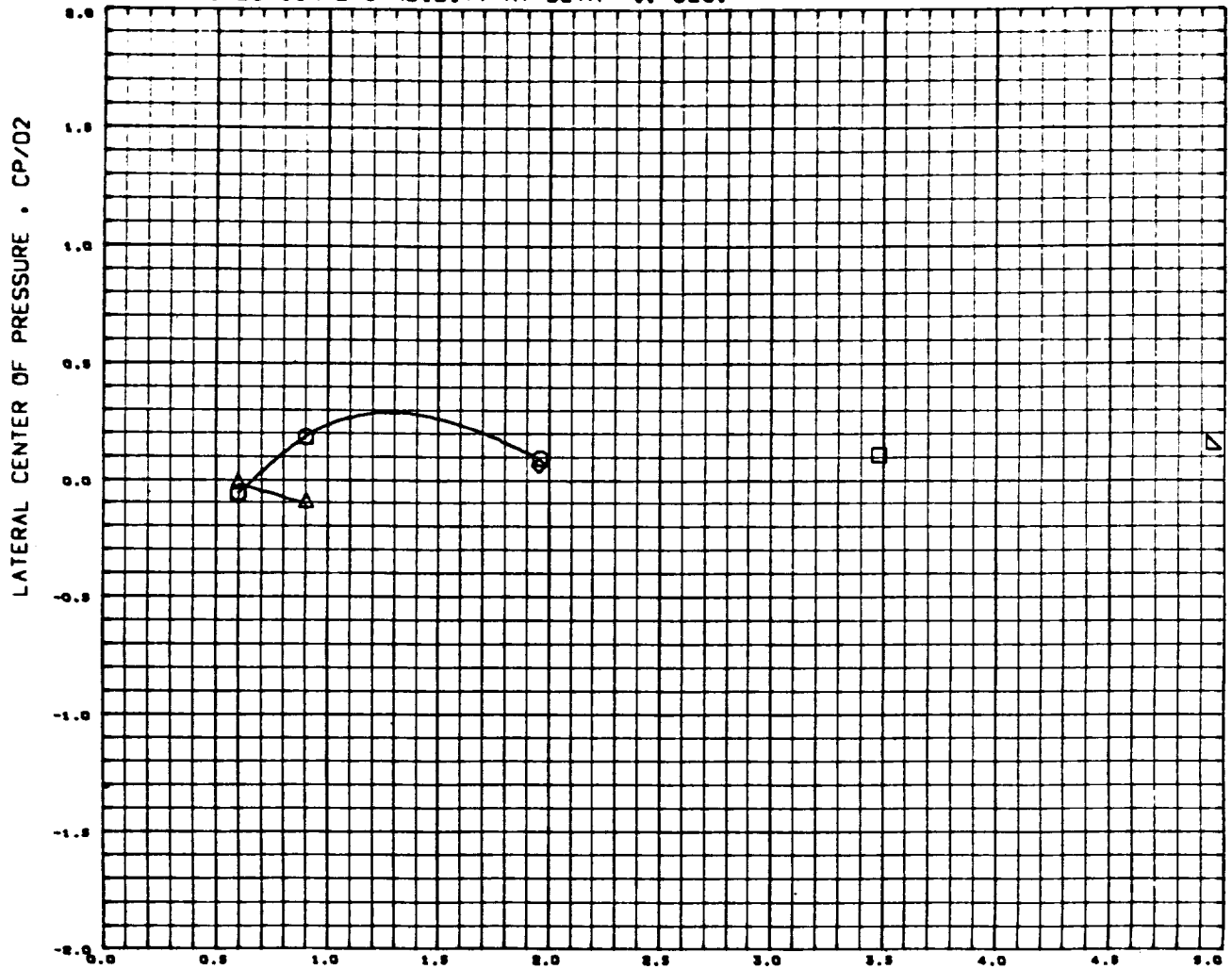
REFERENCE INFORMATION		
SREP	7.7005	50. IN.
LRFP	3.1700	IN.
BRFP	4.3920	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



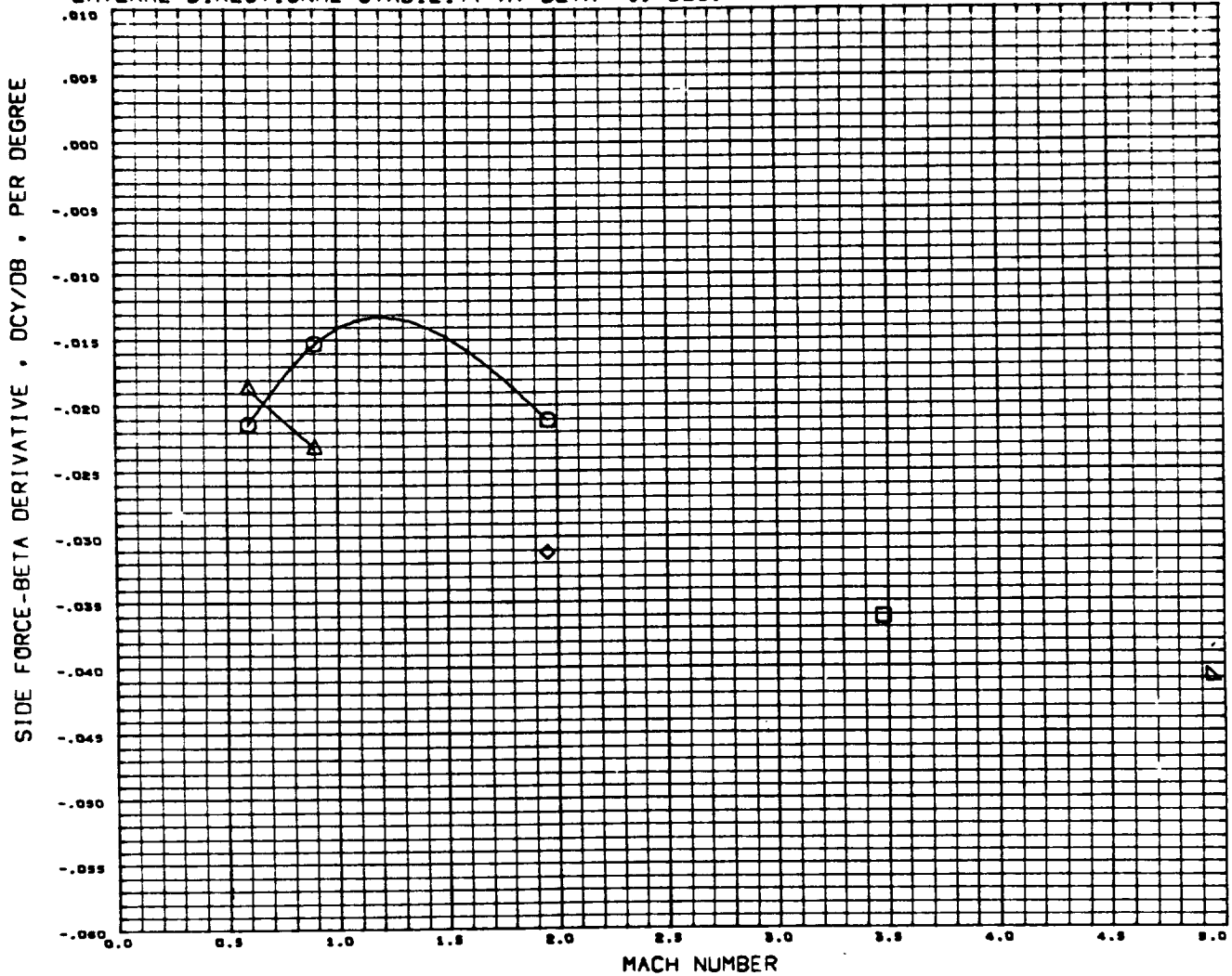
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	REFERENCE INFORMATION
(13422F)	M496-MSFC AR11981-3 MODEL W982	0.000	0.000	0.000	BREF 7.7005 80.IN.
(13422C)	M496-MSFC AR11981-3 MODEL W982	10.000	0.000	0.000	LREF 3.1700 IN.
(13422H)	M496-MSFC AR11981-3 MODEL W982	15.000	0.000	0.000	BREF 4.3820 IN.
(13422I)	M496-MSFC AR11981-3 MODEL W982	30.000	0.000	0.000	XMRP 2.4000 IN.
					YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



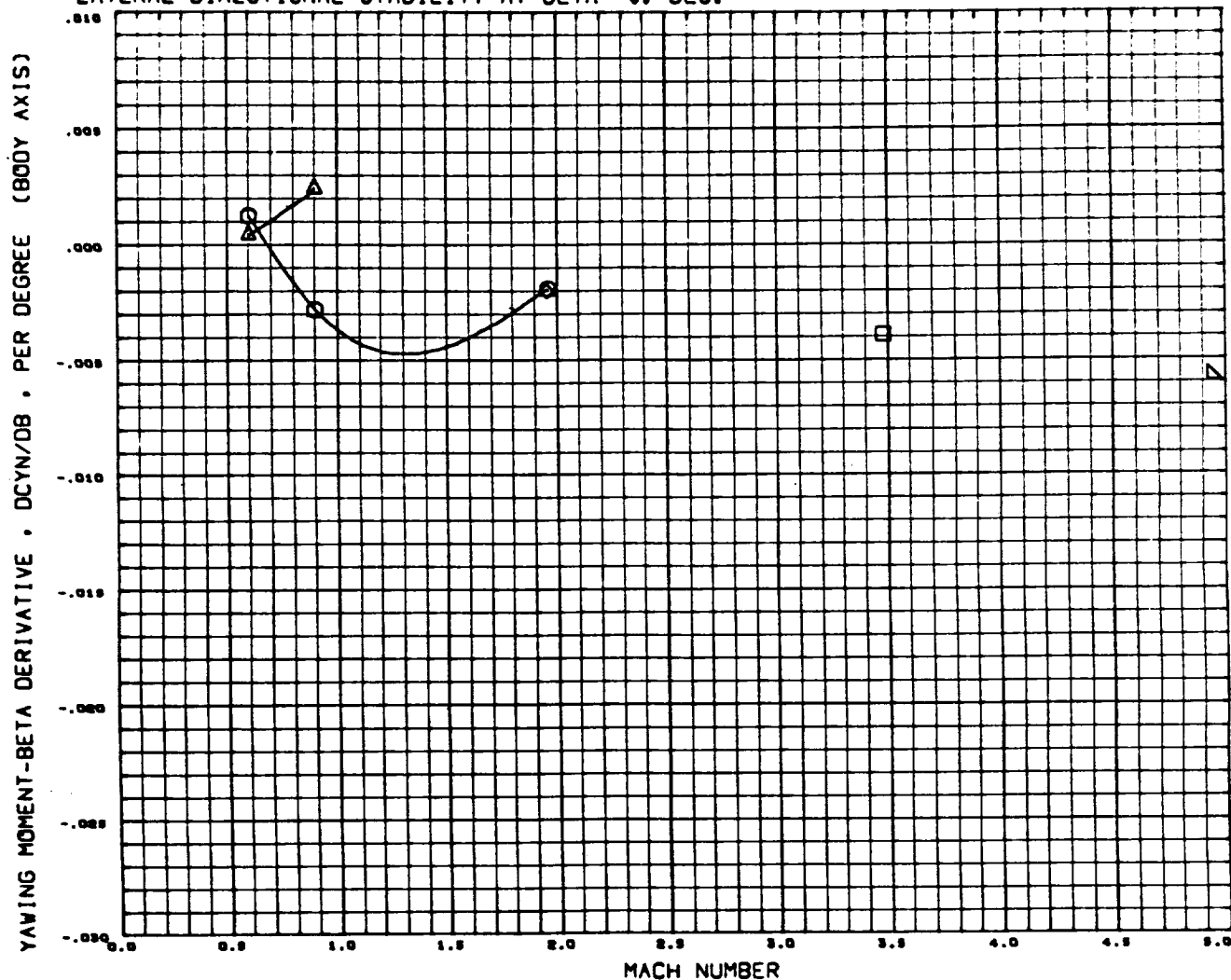
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13637F)	M496-M3FC AR11901-3 MODEL W8H82C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 33. IN.
(13637G)	M496-M3FC AR11901-3 MODEL W8H82C12V2	10.000	0.000	0.000	0.000	LREF 1.5360 IN.
(13638H)	M496-M3FC AR11901-3 MODEL W8H82C12V2	15.000	0.000	0.000	-20.000	SRFP 4.3000 IN.
(13639I)	M496-M3FC AR11901-3 MODEL W8H82C12V2	30.000	0.000	0.000	-40.000	YMRP 2.4000 IN.
(13640J)	M496-M3FC AR11901-3 MODEL W8H82C12V2	50.000	0.000	0.000	-60.000	ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



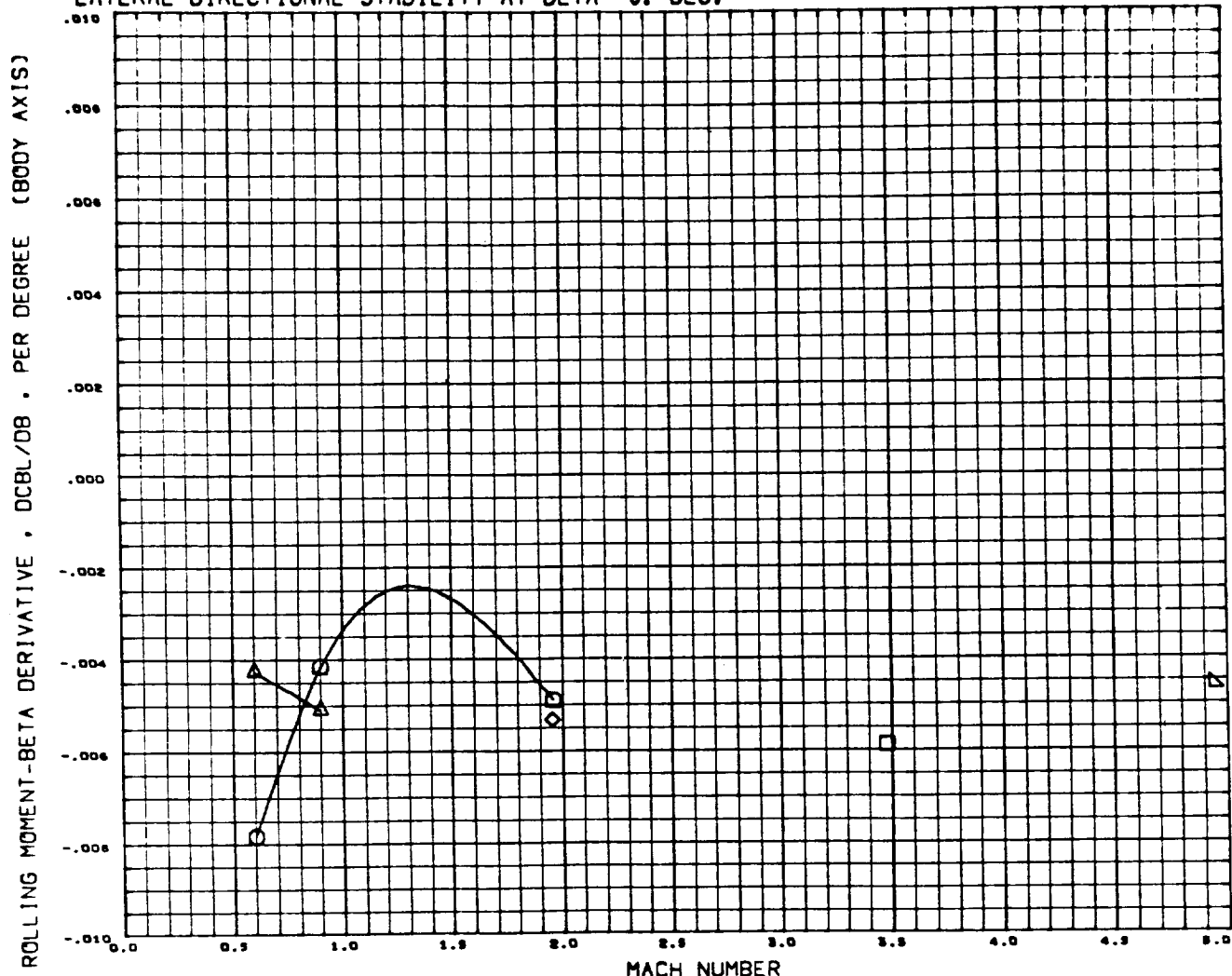
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13937F)	M496-HSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13937G)	M496-HSFC AR11981-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.5360 IN.
(13937H)	M496-HSFC AR11981-3 MODEL	15.000	0.000	0.000	-20.000	BREF 4.3000 IN.
(13937I)	M496-HSFC AR11981-3 MODEL	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
(13937J)	M496-HSFC AR11981-3 MODEL	50.000	0.000	0.000	-60.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(134377)	M496-NSFC AR11901-3 MODEL W6H8ZC12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(134378)	M496-NSFC AR11901-3 MODEL W6H8ZC12V2	10.000	0.000	0.000	0.000	LREF 1.3360 IN.
(134380)	M496-NSFC AR11901-3 MODEL W6H8ZC12V2	15.000	0.000	0.000	-20.000	BREF 4.3000 IN.
(134381)	M496-NSFC AR11901-3 MODEL W6H8ZC12V2	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
(134400)	M496-NSFC AR11901-3 MODEL W6H8ZC12V2	50.000	0.000	0.000	-60.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



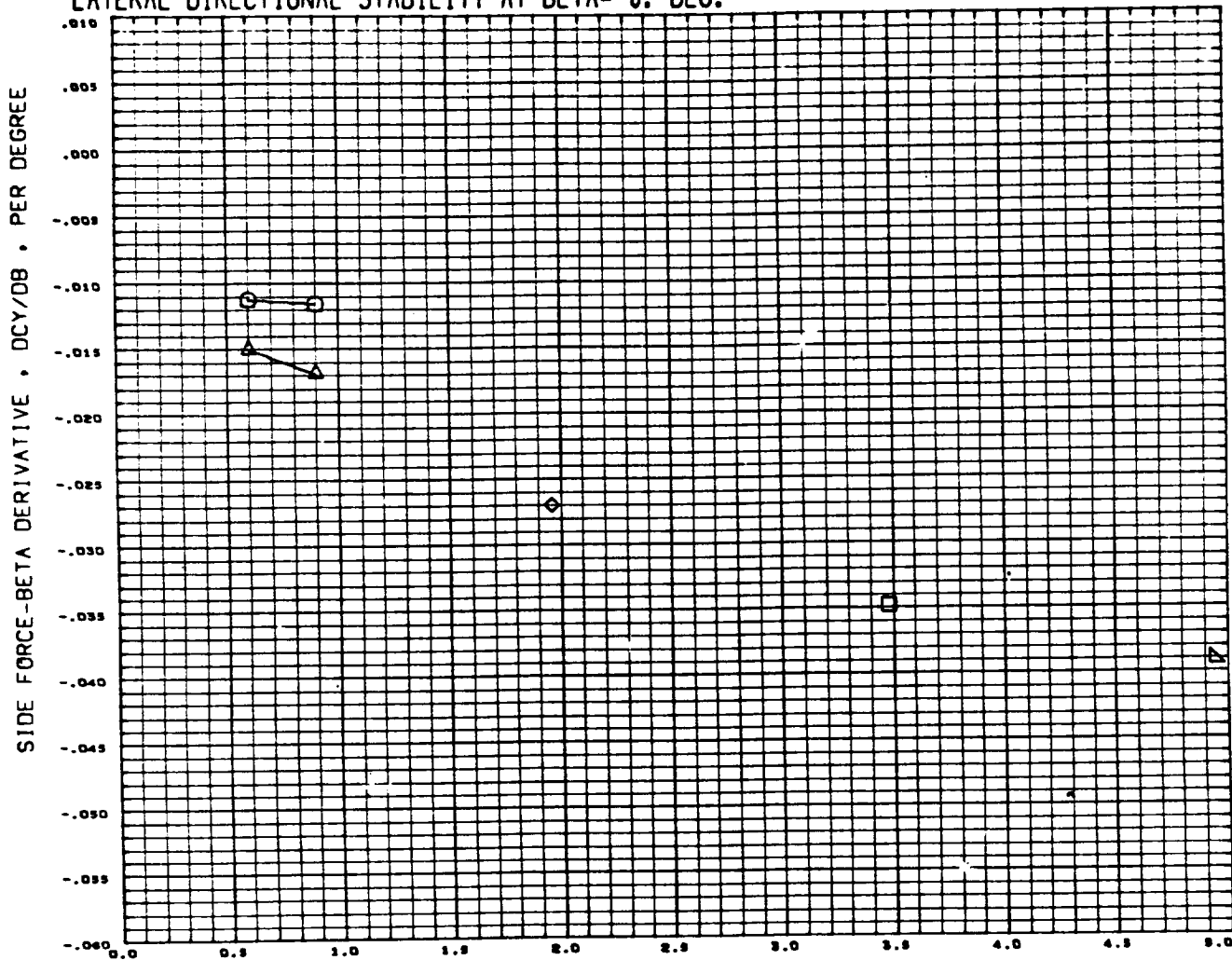
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13937F)	M496-HSFC AR11991-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13937G)	M496-HSFC AR11991-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.5360 IN.
(13939H)	M496-HSFC AR11991-3 MODEL	15.000	0.000	0.000	-20.000	SREF 4.3000 IN.
(13939I)	M496-HSFC AR11991-3 MODEL	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
(13940J)	M496-HSFC AR11991-3 MODEL	60.000	0.000	0.000	-60.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13633F)	M496-M3FC AR11961-3 MODEL W6H82C12	0.000	0.000	0.000	0.000	SREF 4.6229 SQ. IN.
(13633G)	M496-M3FC AR11961-3 MODEL W6H82C12	10.000	0.000	0.000	0.000	LREF 1.3360 IN.
(13634H)	M496-M3FC AR11961-3 MODEL W6H82C12	15.000	0.000	0.000	-20.000	BREF 4.3000 IN.
(13635I)	M496-M3FC AR11961-3 MODEL W6H82C12	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
(13636J)	M496-M3FC AR11961-3 MODEL W6H82C12	50.000	0.000	0.000	-60.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0029

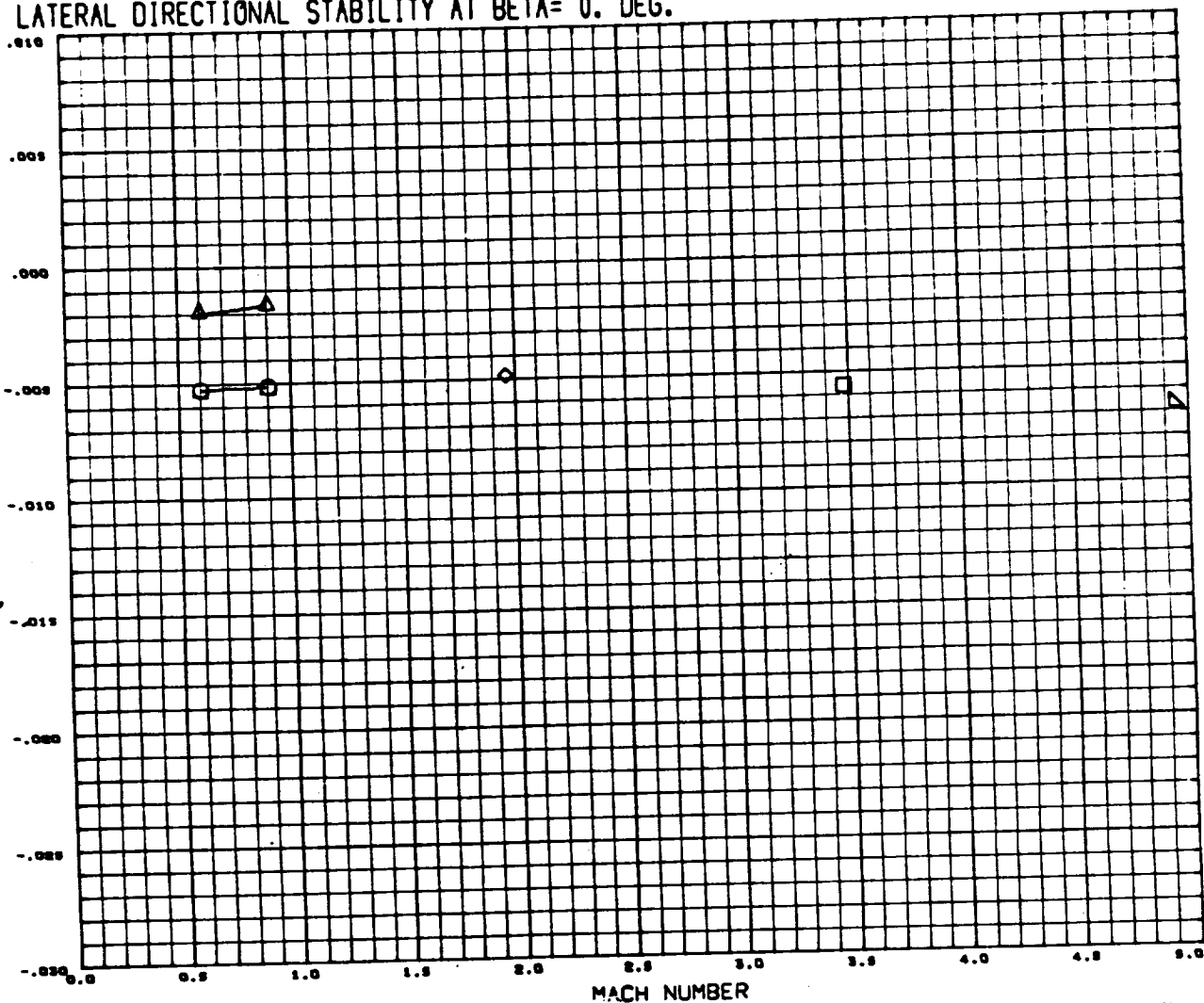
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13433F)	M496-MSFC AR11981-3 MODEL WSHBZC12	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13433G)	M496-MSFC AR11981-3 MODEL WSHBZC12	10.000	0.000	0.000	0.000	LREF 1.3360 IN.
(13433H)	M496-MSFC AR11981-3 MODEL WSHBZC12	15.000	0.000	0.000	-20.000	SREF 4.3000 IN.
(13433I)	M496-MSFC AR11981-3 MODEL WSHBZC12	30.000	0.000	0.000	-40.000	YMRP 2.4000 IN.
(13433J)	M496-MSFC AR11981-3 MODEL WSHBZC12	50.000	0.000	0.000	-80.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

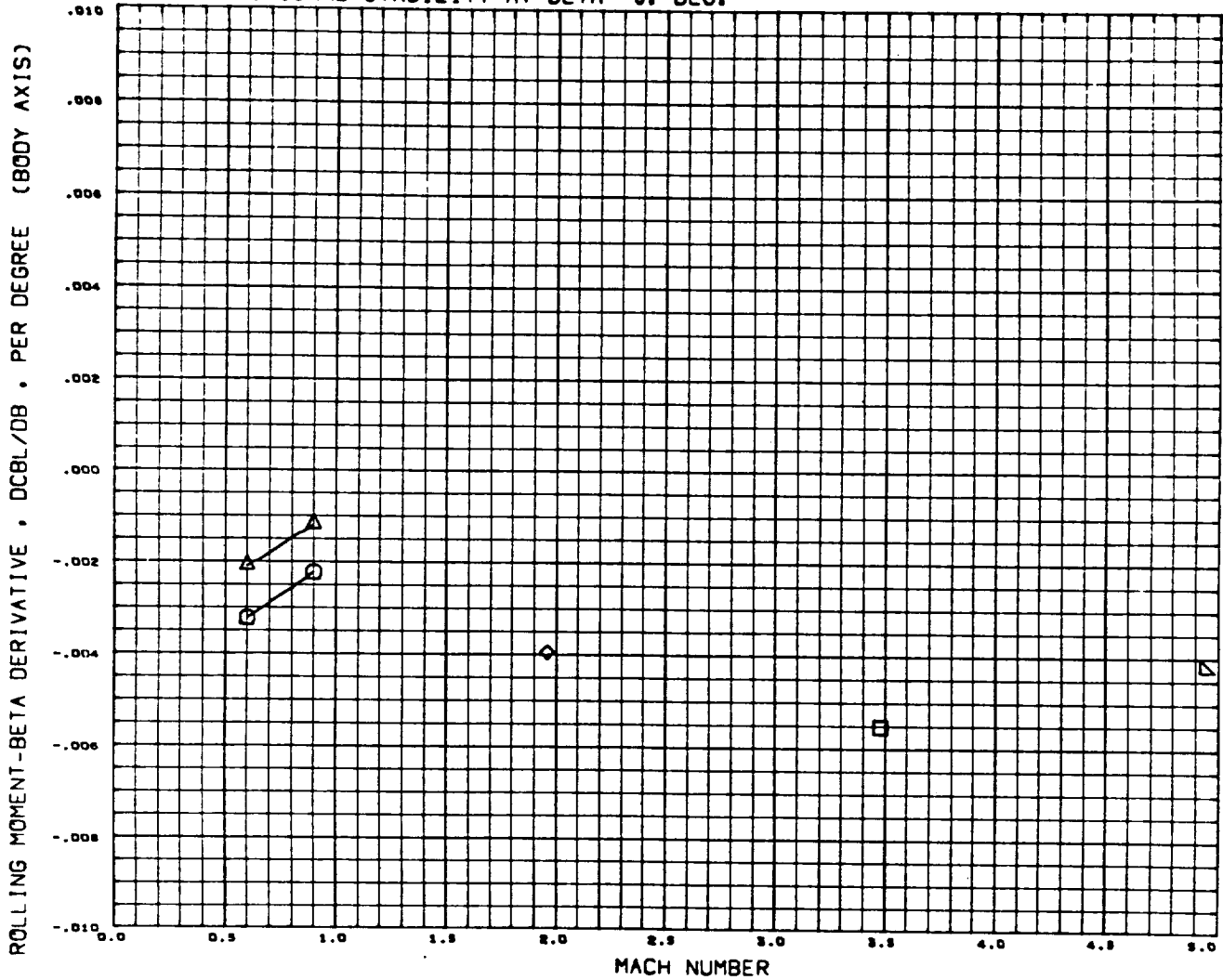
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

YAWING MOMENT-BETA DERIVATIVE, DCYN/DB, PER DEGREE (BODY AXIS)



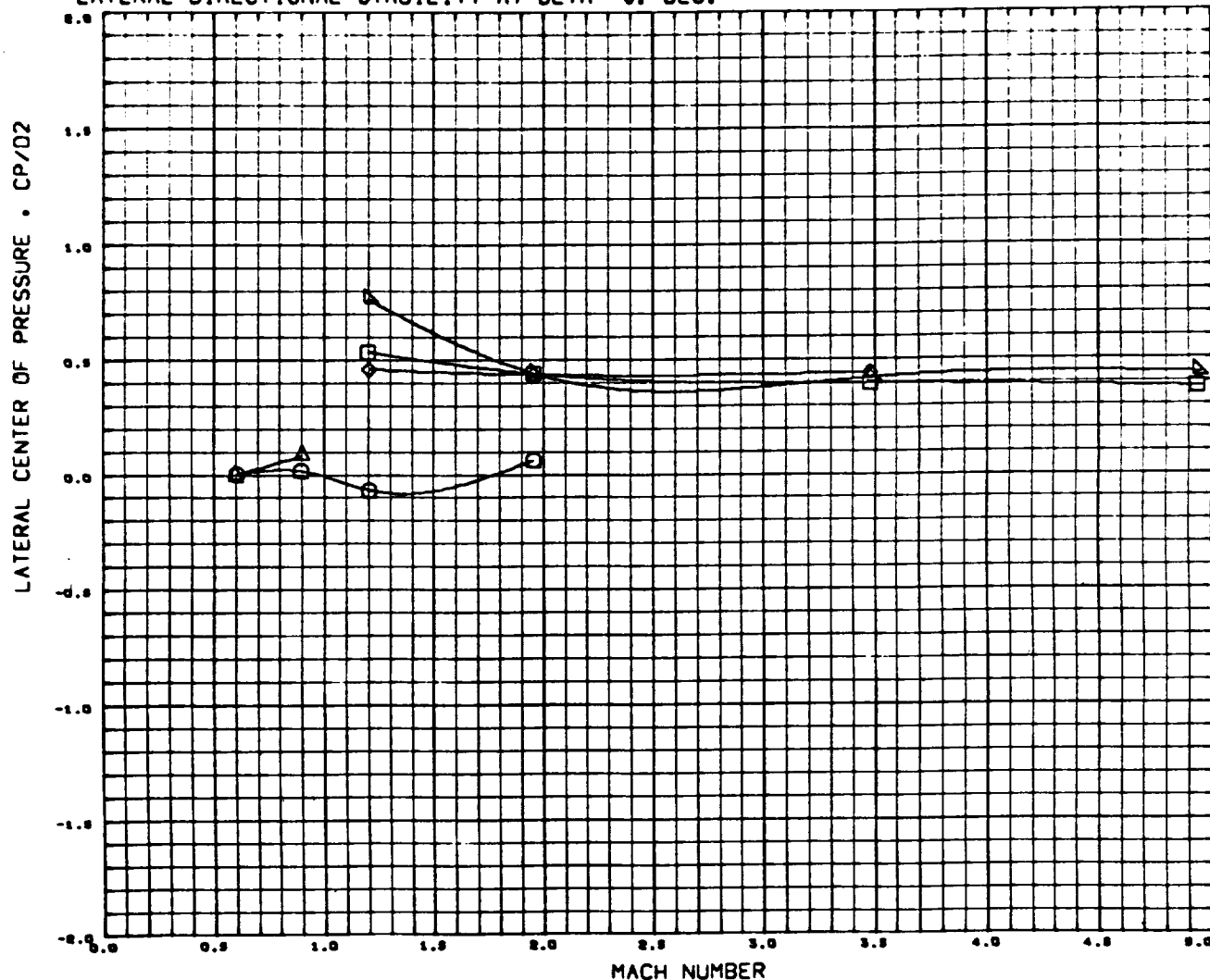
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13433P)	H496-HSPC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.6225 50.1N.
(134336)	H496-HSPC AR11981-3 MODEL	10.000	0.000	0.000	0.000	LREF 1.5360 1N.
(13434H)	H496-HSPC AR11981-3 MODEL	15.000	0.000	0.000	-20.000	BREF 4.3000 1N.
(134351)	H496-HSPC AR11981-3 MODEL	30.000	0.000	0.000	-40.000	XHRP 2.4000 1N.
(13436J)	H496-HSPC AR11981-3 MODEL	50.000	0.000	0.000	-60.000	YHRP 0.0000 1N.
						ZHRP 0.0025
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



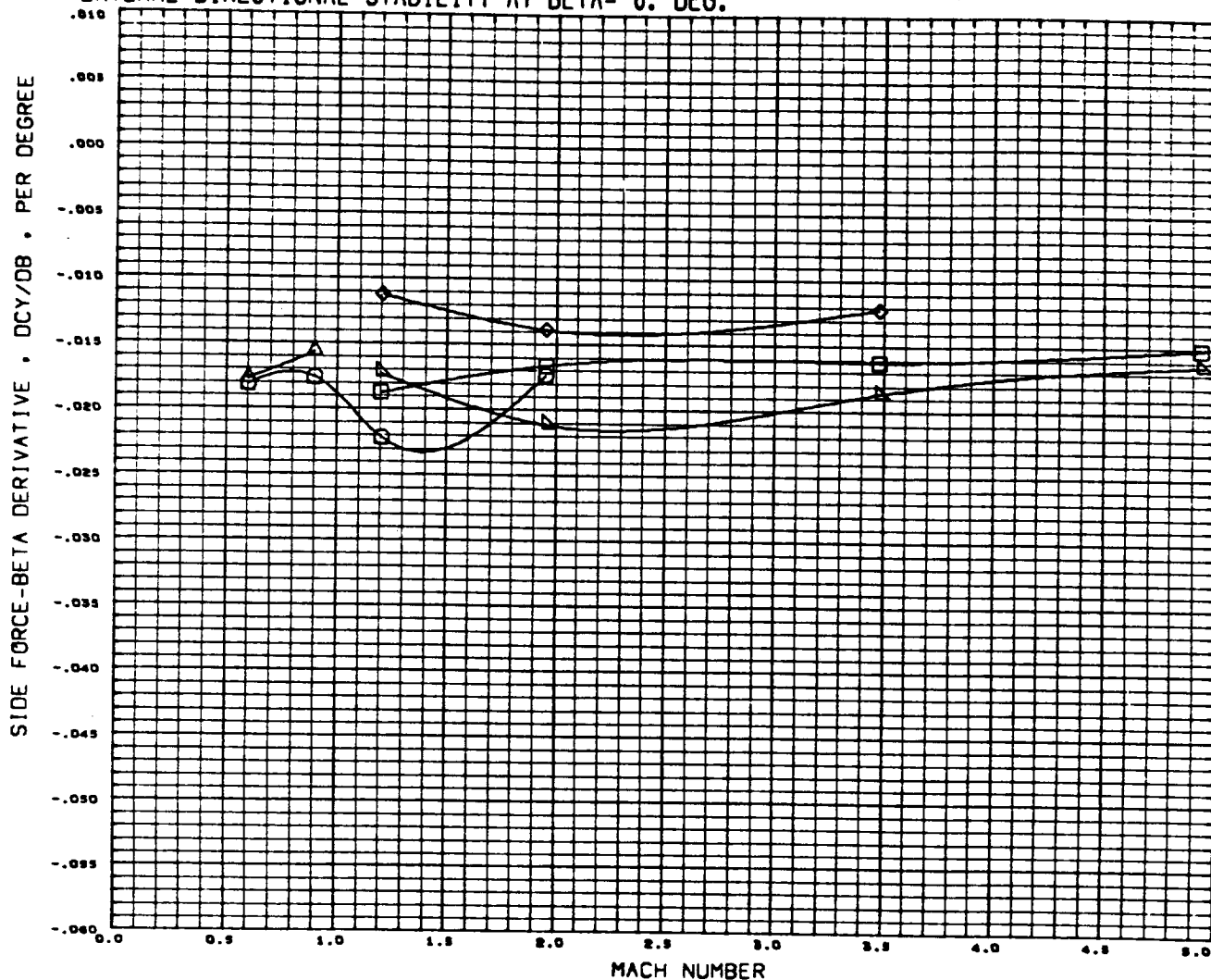
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13433F)	M496-MSFC AR11991-3 WCOEL WSHB2C12	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(13433C)	M496-MSFC AR11991-3 WCOEL WSHB2C12	10.000	0.000	0.000	0.000	LREF 1.5360 IN.
(13434H)	M496-MSFC AR11991-3 WCOEL WSHB2C12	15.000	0.000	0.000	-20.000	BREF 4.3000 IN.
(134351)	M496-MSFC AR11991-3 WCOEL WSHB2C12	30.000	0.000	0.000	-40.000	ZMRP 2.4000 IN.
(13436J)	M496-MSFC AR11991-3 WCOEL WSHB2C12	50.000	0.000	0.000	-60.000	YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



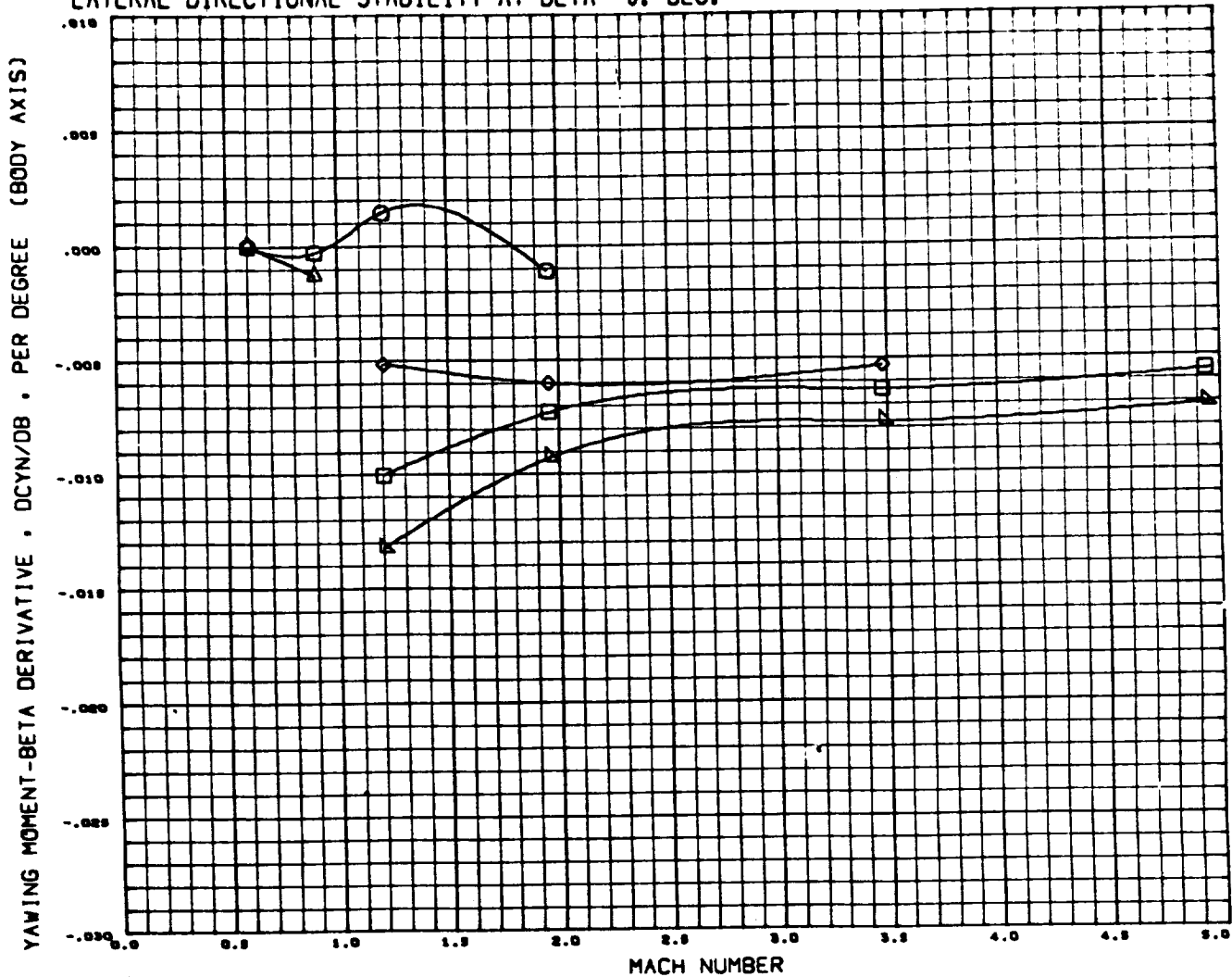
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	REFERENCE INFORMATION
(13023P)	M496-MSFC AR11901-3 MODEL W982V1	0.000	0.000	0.000	SREF 7.7005 50. IN.
(13023Q)	M496-MSFC AR11901-3 MODEL W982V1	10.000	0.000	0.000	LREF 3.1700 IN.
(13023R)	M496-MSFC AR11901-3 MODEL W982V1	15.000	0.000	0.000	BREF 4.3520 IN.
(13023S)	M496-MSFC AR11901-3 MODEL W982V1	30.000	0.000	0.000	XMRP 2.4000 IN.
(13023T)	M496-MSFC AR11901-3 MODEL W982V1	50.000	0.000	0.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLON	ELEVTR	REFERENCE INFORMATION
(13423F)	M496-MSFC AR11991-3 MOCEL W982V1	0.000	0.000	0.000	SREF 7.7003 SQ. IN.
(13423G)	M496-MSFC AR11991-3 MOCEL W982V1	10.000	0.000	0.030	LREF 3.1700 IN.
(13423H)	M496-MSFC AR11991-3 MOCEL W982V1	15.000	0.000	0.000	SREF 4.3920 IN.
(13423J)	M496-MSFC AR11991-3 MOCEL W982V1	30.000	0.000	0.000	XMRP 2.4000 IN.
		50.000	0.000	0.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

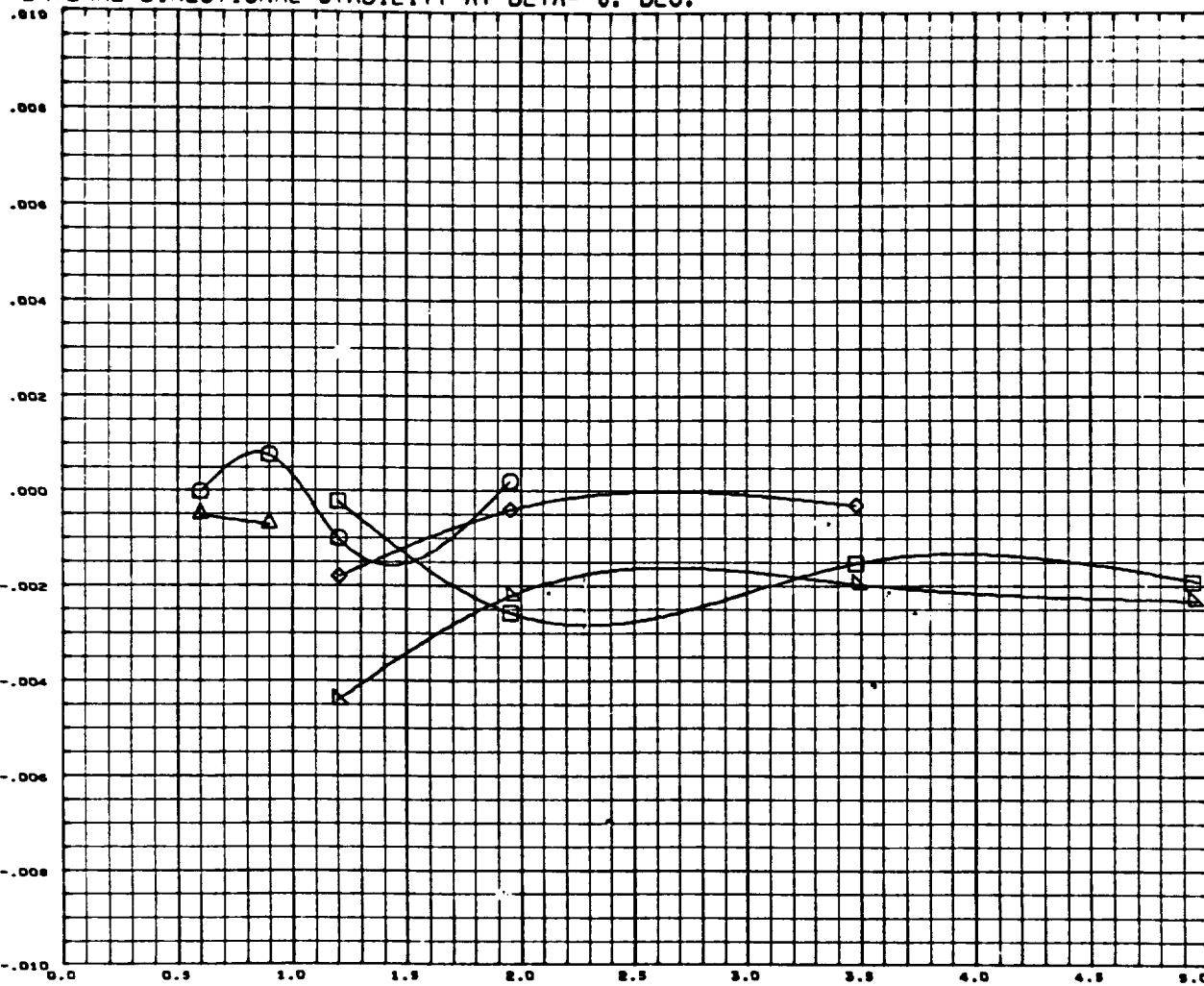
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	REFERENCE INFORMATION		
(13623F)	N496-HSFC AR11991-3 MODEL W882V1	0.000	0.000	0.000	SREF	7.7005	33. IN.
(13623G)	N496-HSFC AR11991-3 MODEL W882V1	10.000	0.000	0.000	LREF	3.1700	IN.
(13623H)	N496-HSFC AR11991-3 MODEL W882V1	15.000	0.000	0.000	BREF	4.3920	IN.
(13623I)	N496-HSFC AR11991-3 MODEL W882V1	30.000	0.000	0.000	XMRP	2.4000	IN.
(13623J)	N496-HSFC AR11991-3 MODEL W882V1	50.000	0.000	0.000	YMRP	0.0000	IN.
					ZMRP	0.0000	IN.
					SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

ROLLING MOMENT-BETA DERIVATIVE, DCBL/DB, PER DEGREE (BODY AXIS)



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(13923F)	M496-HSFC AR11991-3 MODEL W9B2V1
(13923G)	M496-HSFC AR11991-3 MODEL W9B2V1
(13923H)	M496-HSFC AR11991-3 MODEL W9B2V1
(13923I)	M496-HSFC AR11991-3 MODEL W9B2V1
(13923J)	M496-HSFC AR11991-3 MODEL W9B2V1

MACH NUMBER

ALPHA	AILRON	ELEVTR
0.000	0.000	0.000
10.000	0.000	0.000
15.000	0.000	0.000
30.000	0.000	0.000
50.000	0.000	0.000

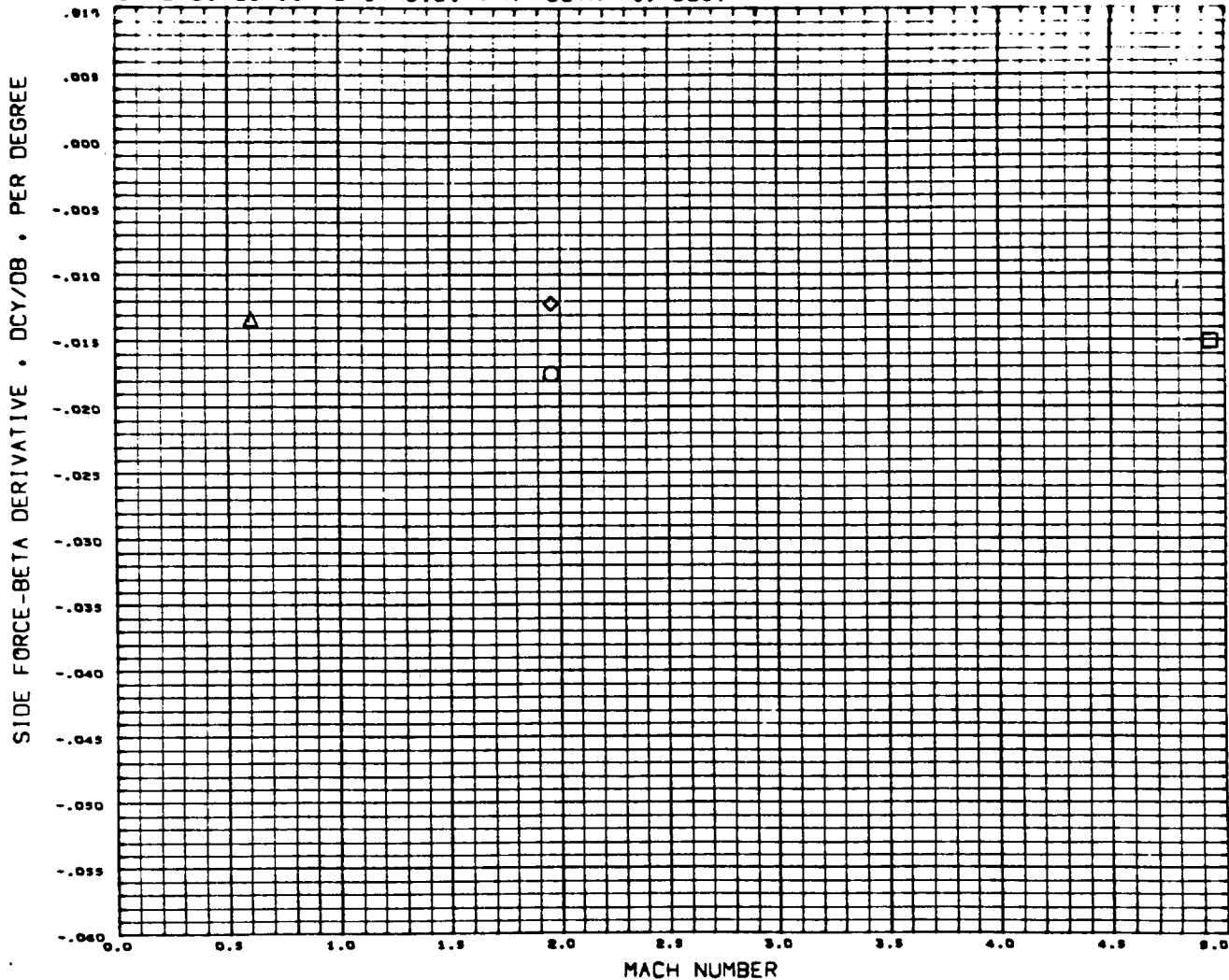
REFERENCE INFORMATION		
SREF	7.7005	SG. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



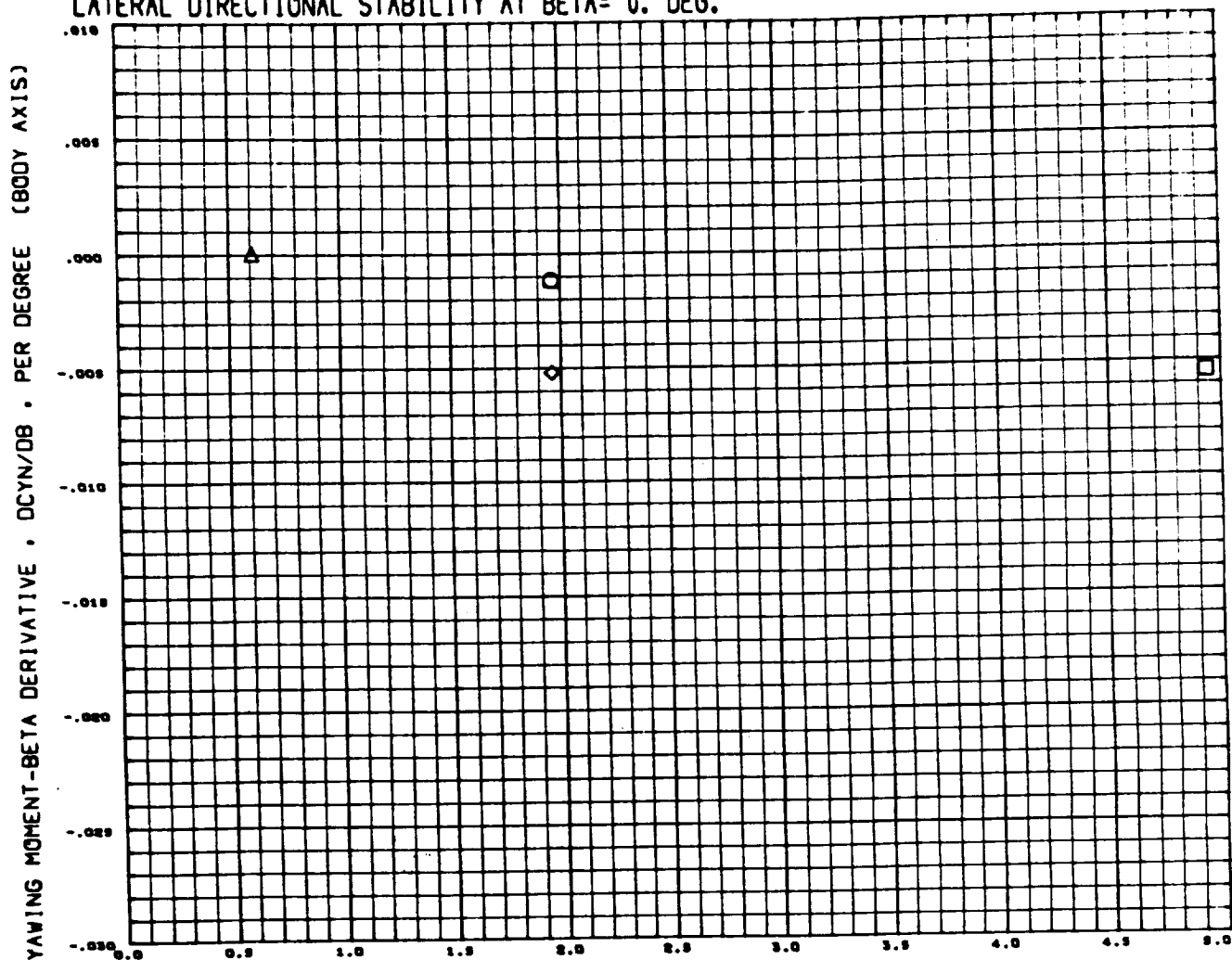
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13024F)	H496-HSFC AR11901-3 MODEL W982C12V1	0.000	0.000	0.000	0.000	SREP 7.7009 80.IN.
(13024G)	H496-HSFC AR11901-3 MODEL W982C12V1	10.000	0.000	0.000	0.000	LREP 3.1700 IN.
(13025H)	H496-HSFC AR11901-3 MODEL W982C12V1	15.000	0.000	0.000	-20.000	BREP 4.3920 IN.
(13026I)	H496-HSFC AR11901-3 MODEL W982C12V1	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0029

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



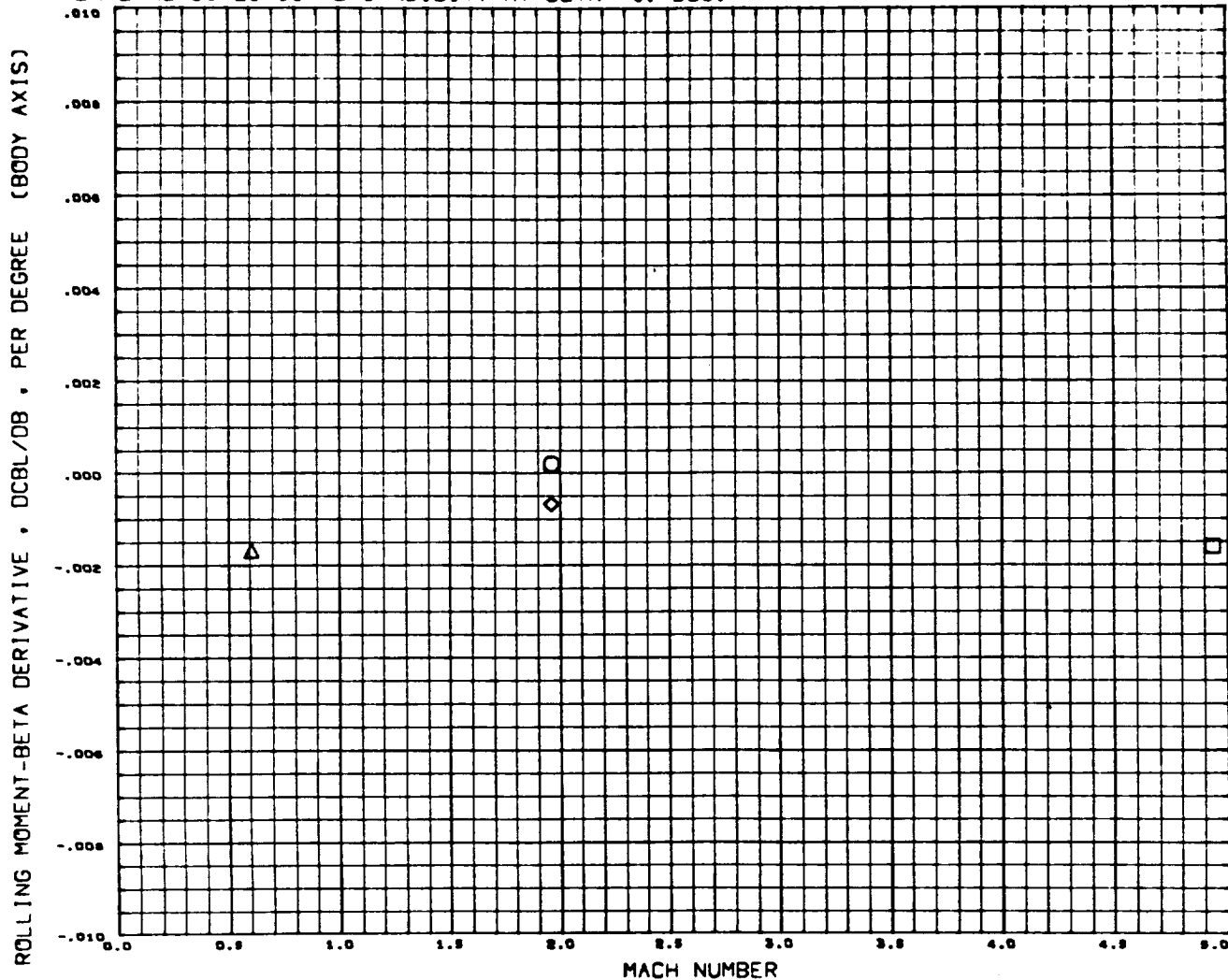
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13924F)	M496-HSFC AR11991-3 WSOEL W982C12V1	0.000	0.000	0.000	0.000	SREF 7.7003 80. IN.
(13924G)	M496-HSFC AR11991-3 WSOEL W982C12V1	10.000	0.000	0.000	0.000	LREF 3.1700 IN.
(13925H)	M496-HSFC AR11991-3 WSOEL W982C12V1	15.000	0.000	0.000	-20.000	BREF 4.3920 IN.
(13926I)	M496-HSFC AR11991-3 WSOEL W982C12V1	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



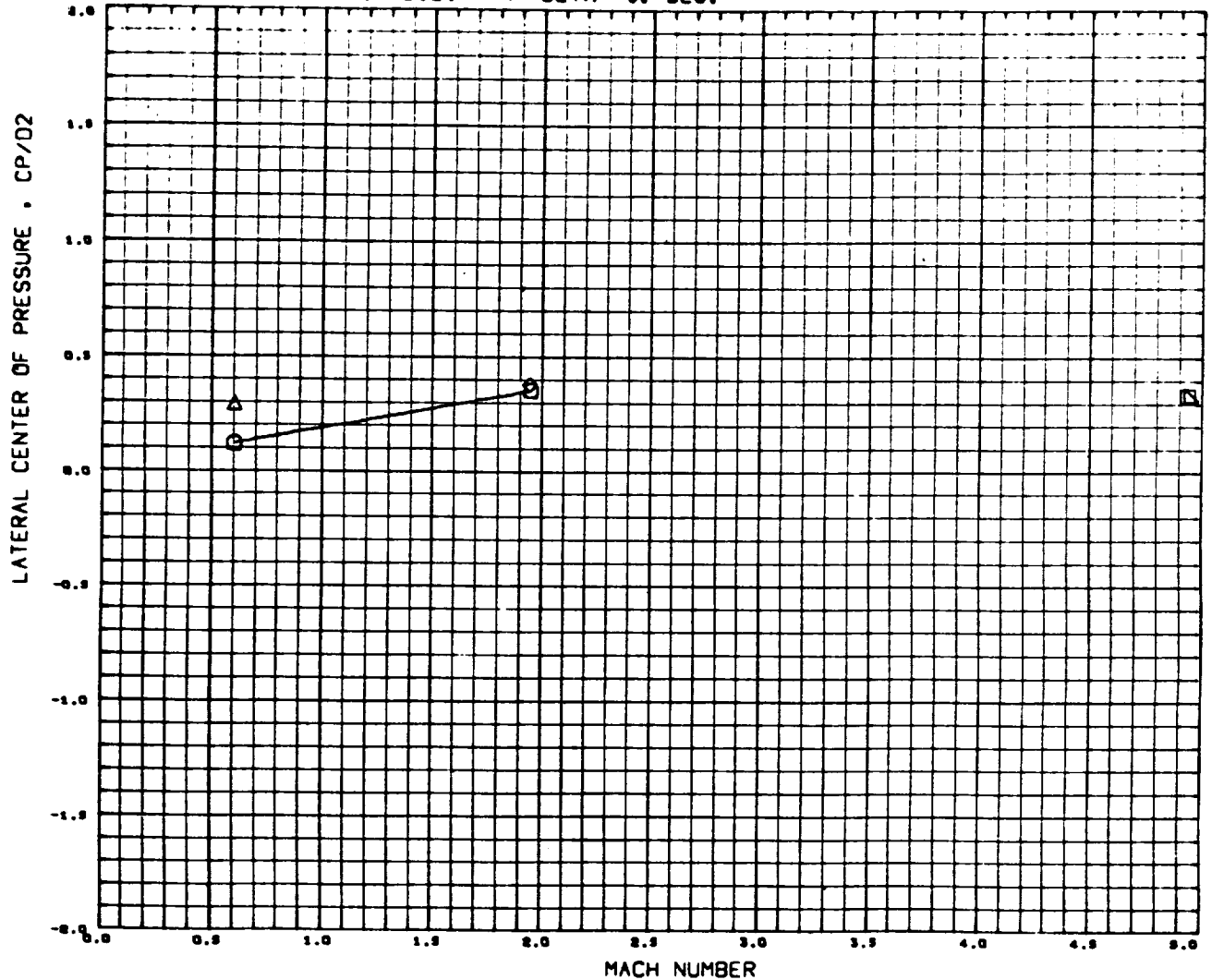
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13984F)	N498-HSFC AR11991-3 MODEL W982C12V1	0.000	0.000	0.000	0.000	SREP 7.7005 90.IN.
(13984G)	N498-HSFC AR11991-3 MODEL W982C12V1	10.000	0.000	0.000	0.000	LREP 3.1700 IN.
(13985H)	N498-HSFC AR11991-3 MODEL W982C12V1	15.000	0.000	0.000	-20.000	BREP 4.3980 IN.
(13986I)	N498-HSFC AR11991-3 MODEL W982C12V1	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION				ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION	
(13924F)	M496-HSFC	AR11981-3	MODEL	W9B2C12V1	0.000	0.000	0.000	0.000	SREF	7.7003 83.IN.
(13924G)	M496-HSFC	AR11981-3	MODEL	W9B2C12V1	10.000	0.000	0.000	0.000	LREF	3.1700 IN.
(13925H)	M496-HSFC	AR11981-3	MODEL	W9B2C12V1	15.000	0.000	0.000	-20.000	BREF	4.3920 IN.
(139261)	M496-HSFC	AR11981-3	MODEL	W9B2C12V1	30.000	0.000	0.000	-40.000	YMRP	2.4000 IN.
									YMRP	0.0000 IN.
									ZMRP	0.0000 IN.
									SCALE	0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



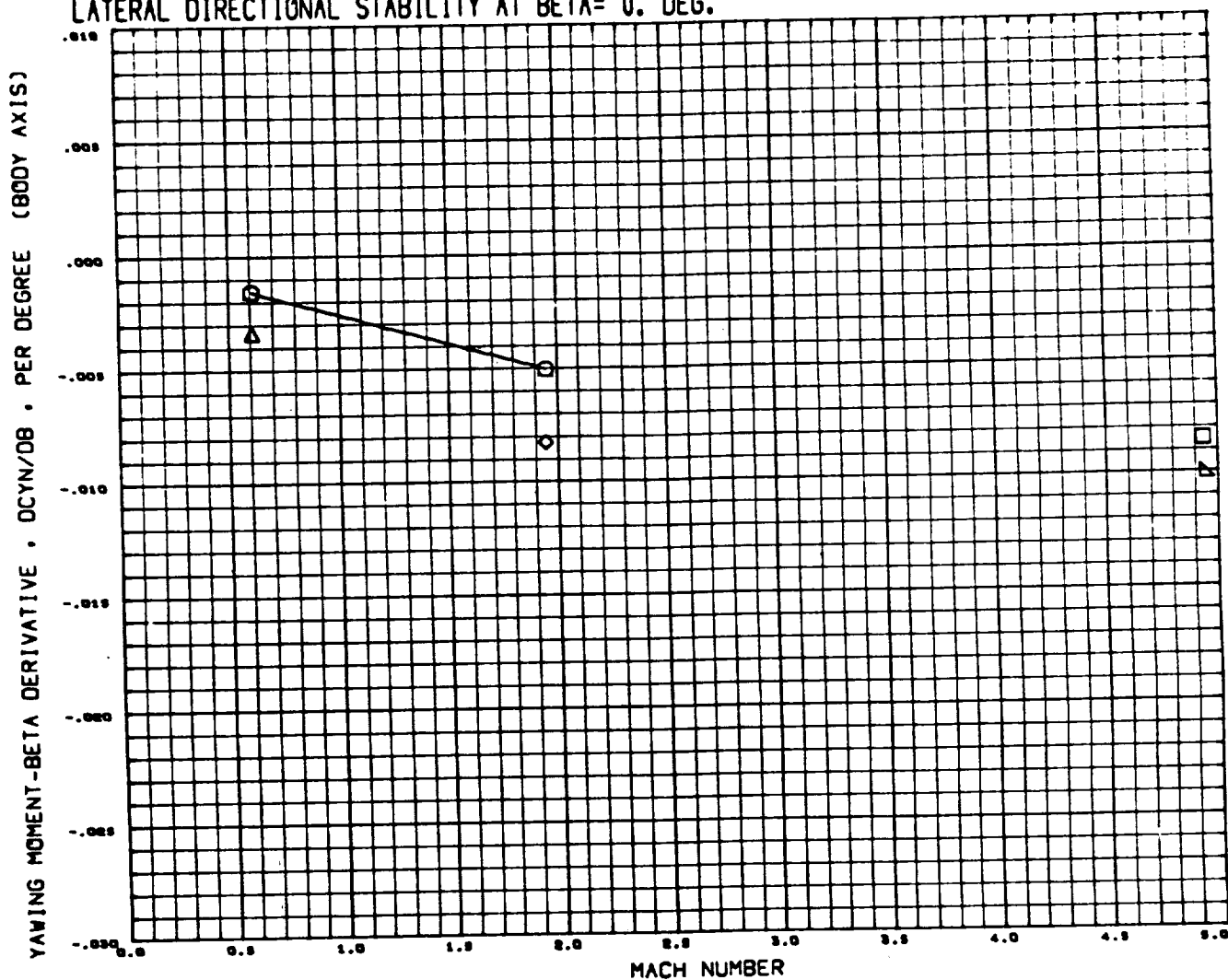
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	REFERENCE INFORMATION
(13826F)	N496-MSFC AR11981-3 MODEL W482V2	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13826G)	N496-MSFC AR11981-3 MODEL W482V2	10.000	0.000	0.000	LREF 1.8980 IN.
(13826H)	N496-MSFC AR11981-3 MODEL W482V2	15.000	0.000	0.000	BREF 3.7200 IN.
(13826I)	N496-MSFC AR11981-3 MODEL W482V2	30.000	0.000	0.000	XMRP 2.4000 IN.
(13826J)	N496-MSFC AR11981-3 MODEL W482V2	50.000	0.000	0.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0028

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



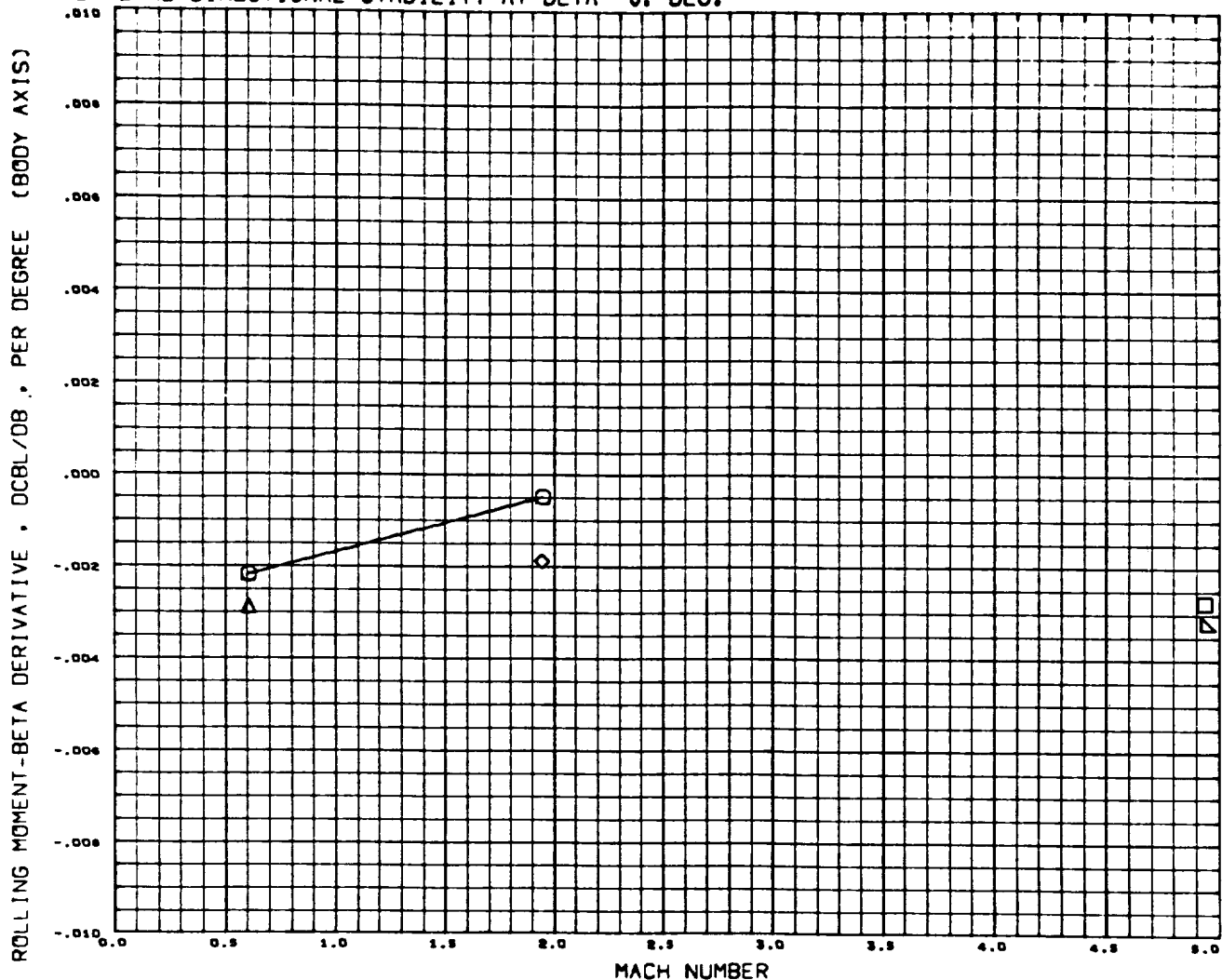
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	REFERENCE INFORMATION
(13929F)	M496-MSFC AR11991-3 MODEL W482V2	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13929G)	M496-MSFC AR11991-3 MODEL W482V2	10.000	0.000	0.000	LREF 1.8980 IN.
(13929H)	M496-MSFC AR11991-3 MODEL W482V2	15.000	0.000	0.000	BREF 3.7200 IN.
(13929I)	M496-MSFC AR11991-3 MODEL W482V2	30.000	0.000	0.000	XWRP 2.4000 IN.
(13929J)	M496-MSFC AR11991-3 MODEL W482V2	50.000	0.000	0.000	YWRP 0.0000 IN.
					ZWRP 0.0000 IN.
					SCALE 0.0025 IN.

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	REFERENCE INFORMATION
(13420F)	H496-H3FC AR11961-3 MODEL W482V2	0.000	0.000	0.000	SREF 4.9327 50.IN.
(13420G)	H496-H3FC AR11961-3 MODEL W482V2	10.000	0.000	0.000	LREF 1.8960 IN.
(13420H)	H496-H3FC AR11961-3 MODEL W482V2	15.000	0.000	0.000	BREF 3.7200 IN.
(13420I)	H496-H3FC AR11961-3 MODEL W482V2	30.000	0.000	0.000	XMRP 2.4000 IN.
(13420J)	H496-H3FC AR11961-3 MODEL W482V2	50.000	0.000	0.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

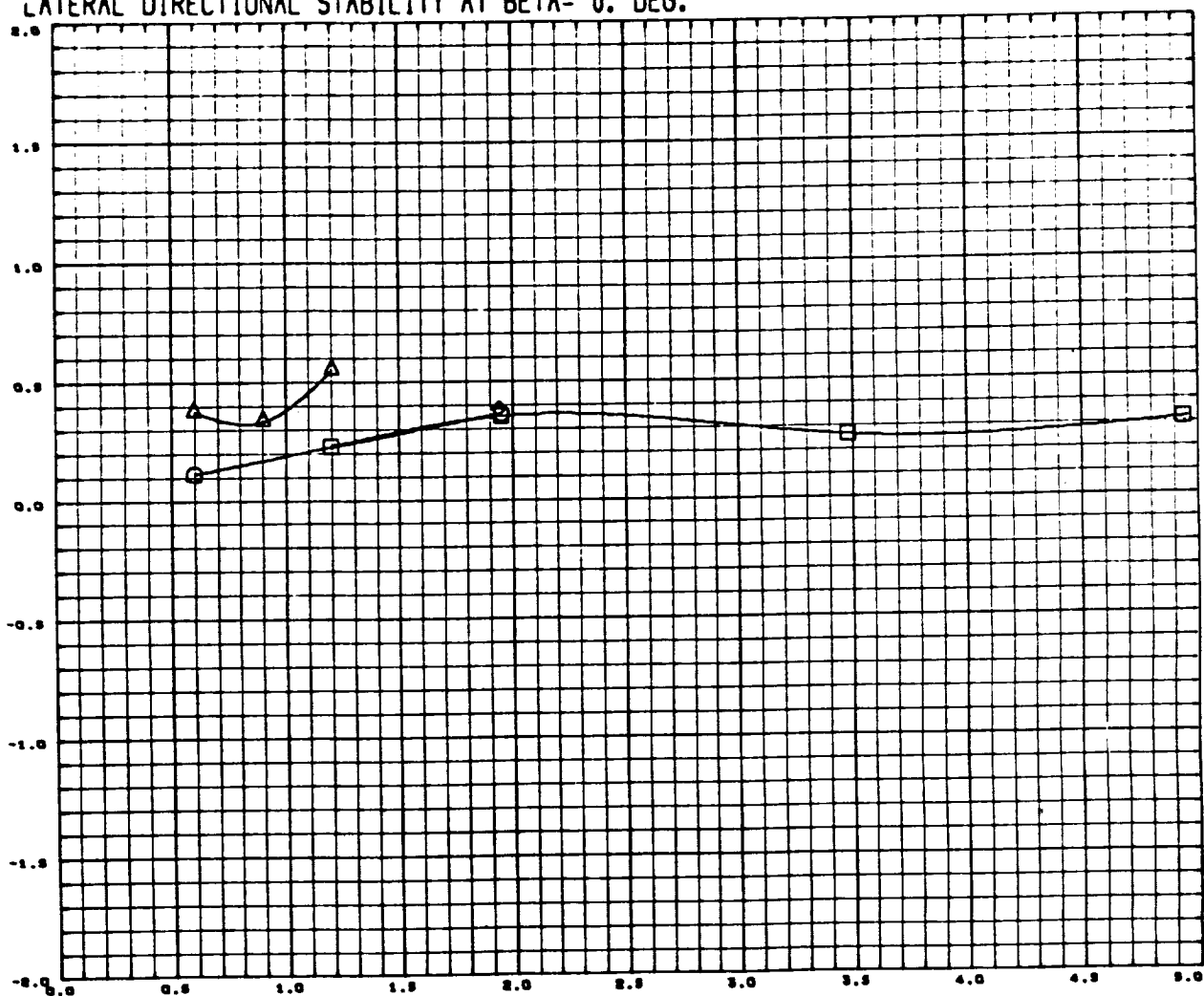
LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	REFERENCE INFORMATION
(13424F)	M496-HSFC AR11991-3 MODEL W482V2	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13424G)	M496-HSFC AR11991-3 MODEL W482V2	10.000	0.000	0.000	LREF 1.6980 IN.
(13424H)	M496-HSFC AR11991-3 MODEL W482V2	15.000	0.000	0.000	BREF 3.7200 IN.
(13424I)	M496-HSFC AR11991-3 MODEL W482V2	30.000	0.000	0.000	XMRP 2.4000 IN.
(13424J)	M496-HSFC AR11991-3 MODEL W482V2	50.000	0.000	0.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.

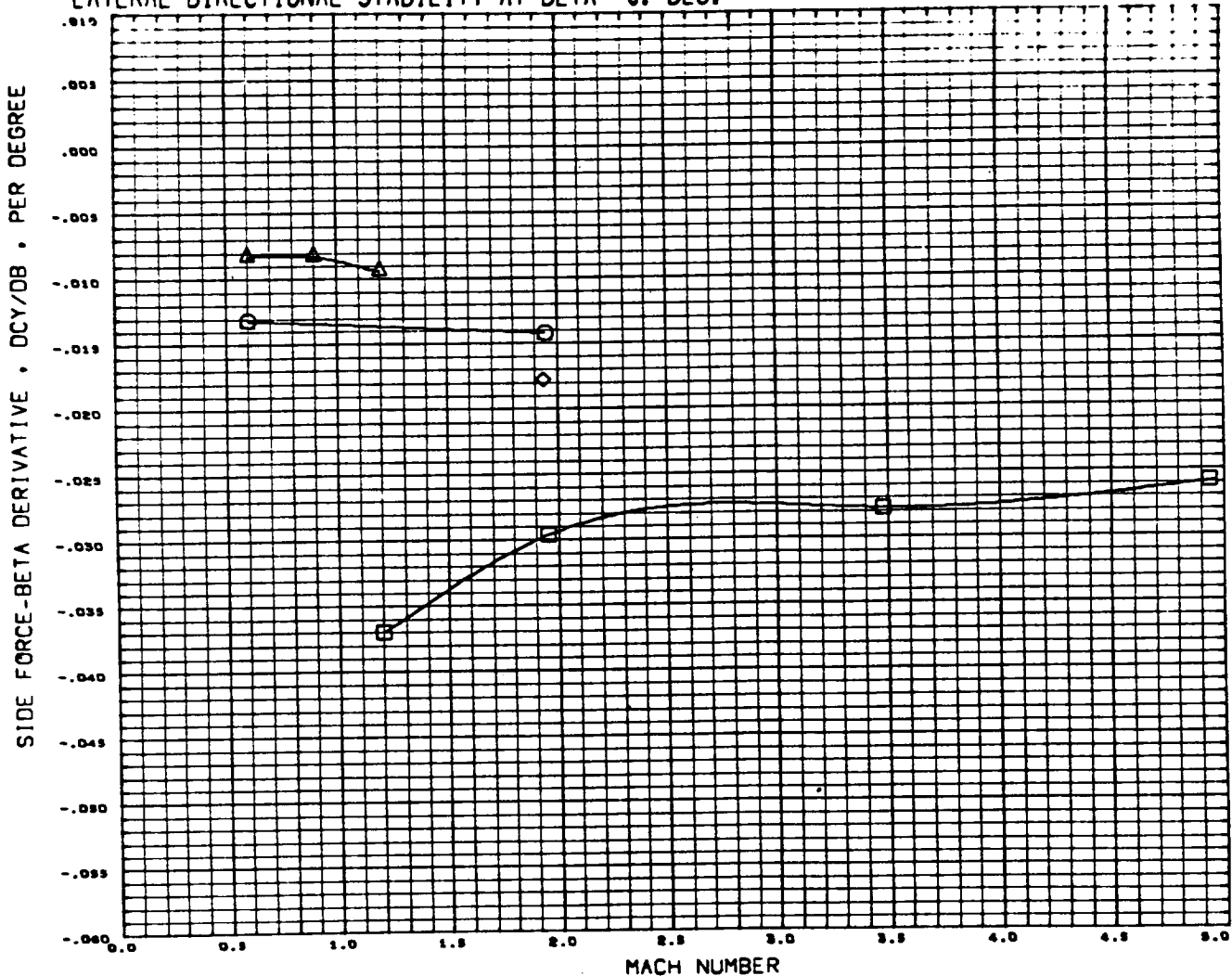
LATERAL CENTER OF PRESSURE • CP/02



MACH NUMBER

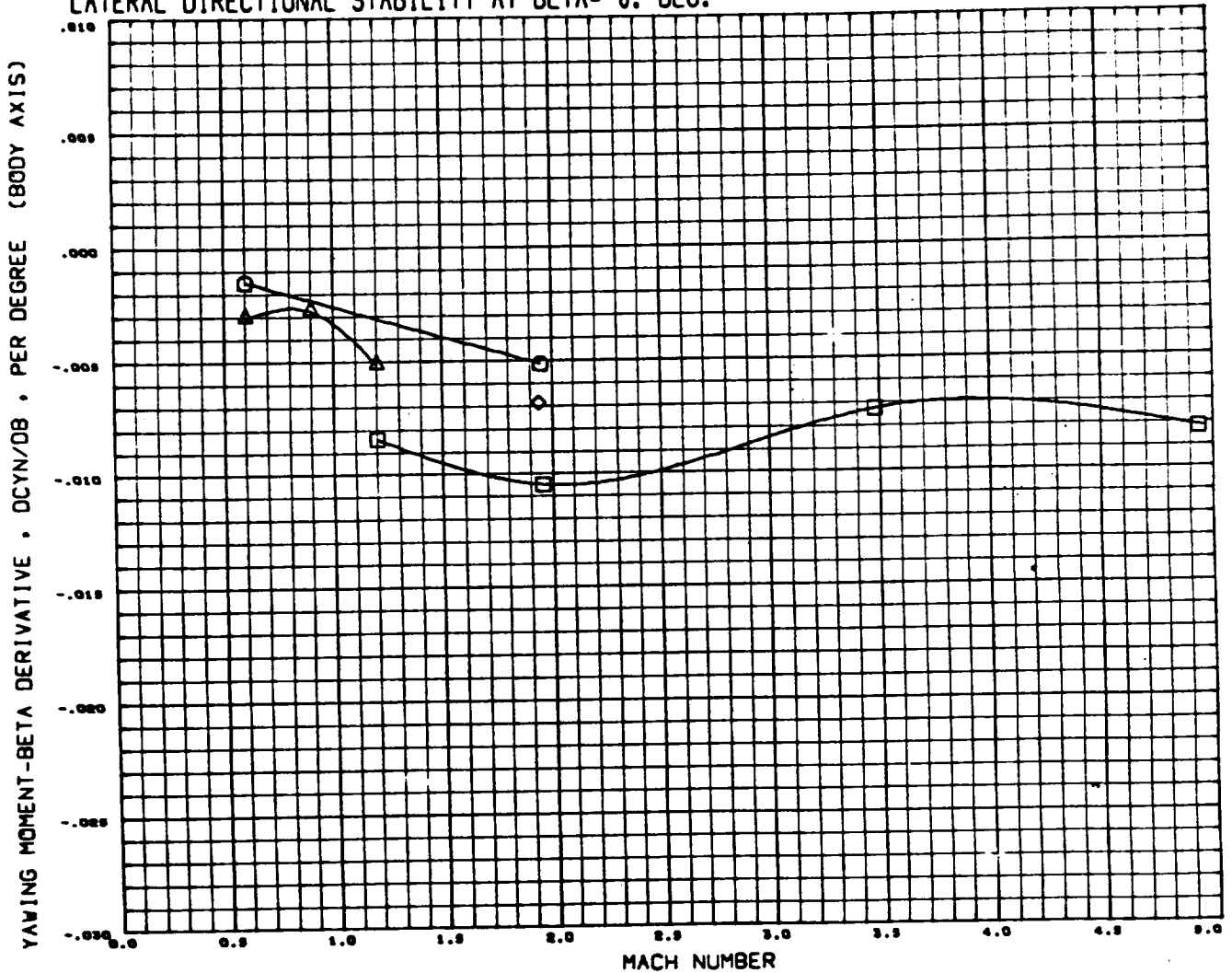
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13629F)	M496-HSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13629G)	M496-HSFC AR11981-3 MODEL W4B2C12V2	10.000	0.000	0.000	0.000	LREF 1.6980 IN.
(13630H)	M496-HSFC AR11981-3 MODEL W4B2C12V2	15.000	0.000	0.000	-20.000	BREF 3.7200 IN.
(13631I)	M496-HSFC AR11981-3 MODEL W4B2C12V2	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



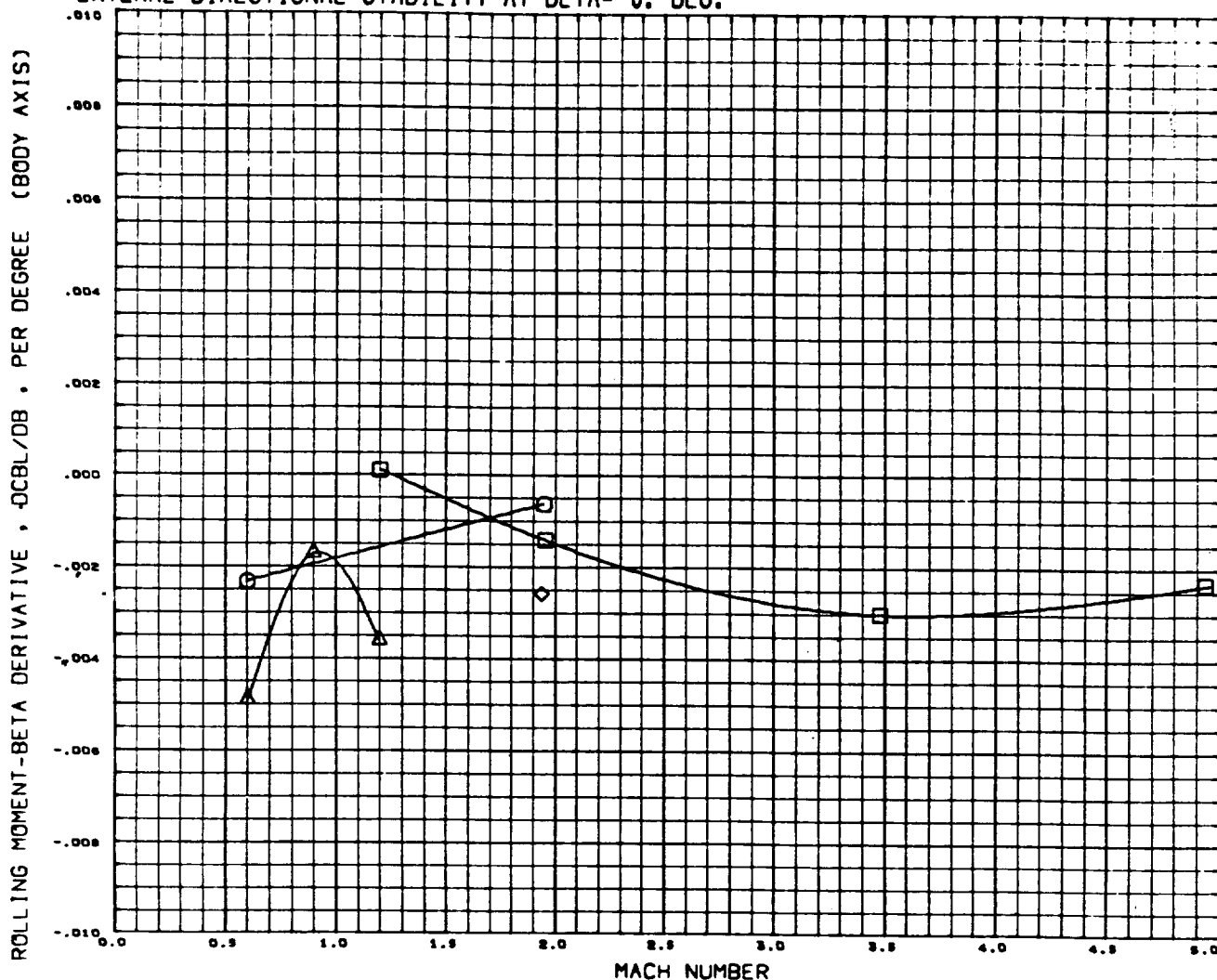
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	CANARD	REFERENCE INFORMATION
(13829F)	M496-HSFC AR11991-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(13929C)	M496-HSFC AR11991-3 MODEL W482C12V2	10.000	0.000	0.000	0.000	LREF 1.8680 IN.
(13930H)	M496-HSFC AR11991-3 MODEL W482C12V2	15.000	0.000	0.000	-20.000	SREF 3.7200 IN.
(134311)	M496-HSFC AR11991-3 MODEL W482C12V2	30.000	0.000	0.000	-40.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



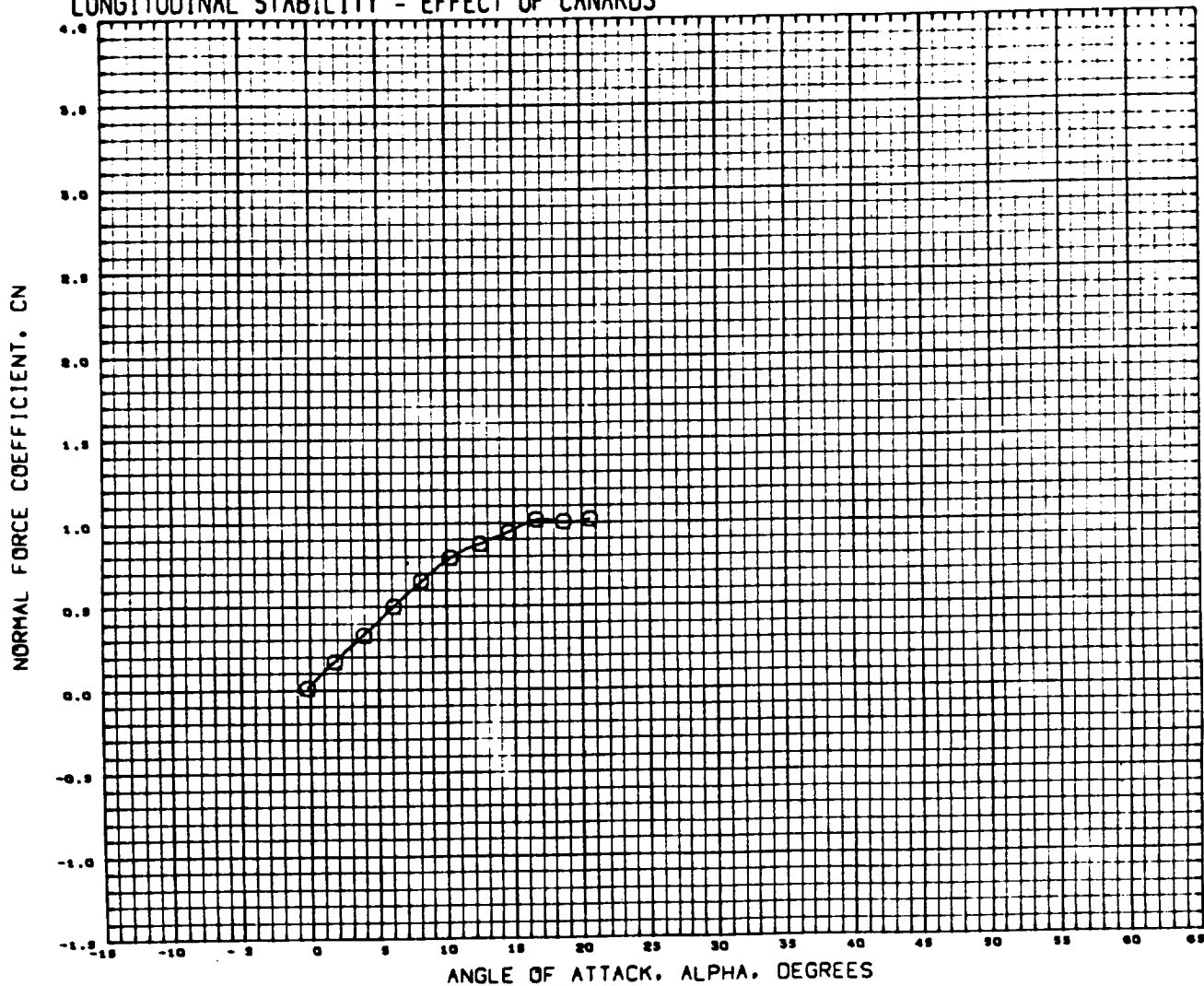
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	ALPHA	ATLRON	ELEVTR	CANARD	REFERENCE INFORMATION
(134297)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREP 4.9327 SQ. IN.
(134296)	M496-HSFC AR11981-3 MODEL W482C12V2	10.000	0.000	0.000	0.000	LREP 1.6980 IN.
(134304)	M496-HSFC AR11981-3 MODEL W482C12V2	15.000	0.000	0.000	-20.000	BREP 3.7200 IN.
(134311)	M496-HSFC AR11981-3 MODEL W482C12V2	30.000	0.000	0.000	-40.000	XHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

LATERAL DIRECTIONAL STABILITY AT BETA= 0. DEG.



DATA SET SYMBOL	CONFIGURATION DESCRIPTION				ALPHA	AILRON	ELEVTR	CANARD	REFERENCE INFORMATION	
(13929F)	M496-MSFC	AR11991-3	MODEL	W482C12V2	0.000	0.000	0.000	0.000	SREF	4.9327 SQ. IN.
(13929G)	M496-MSFC	AR11991-3	MODEL	W482C12V2	10.000	0.000	0.000	0.000	LREF	1.6980 IN.
(13930H)	M496-MSFC	AR11991-3	MODEL	W482C12V2	15.000	0.000	0.000	-20.000	SREF	3.7200 IN.
(13931I)	M496-MSFC	AR11991-3	MODEL	W482C12V2	30.000	0.000	0.000	-40.000	XMRP	2.4000 IN.
									YMRP	0.0000 IN.
									ZMRP	0.0000 IN.
									SCALE	0.0025

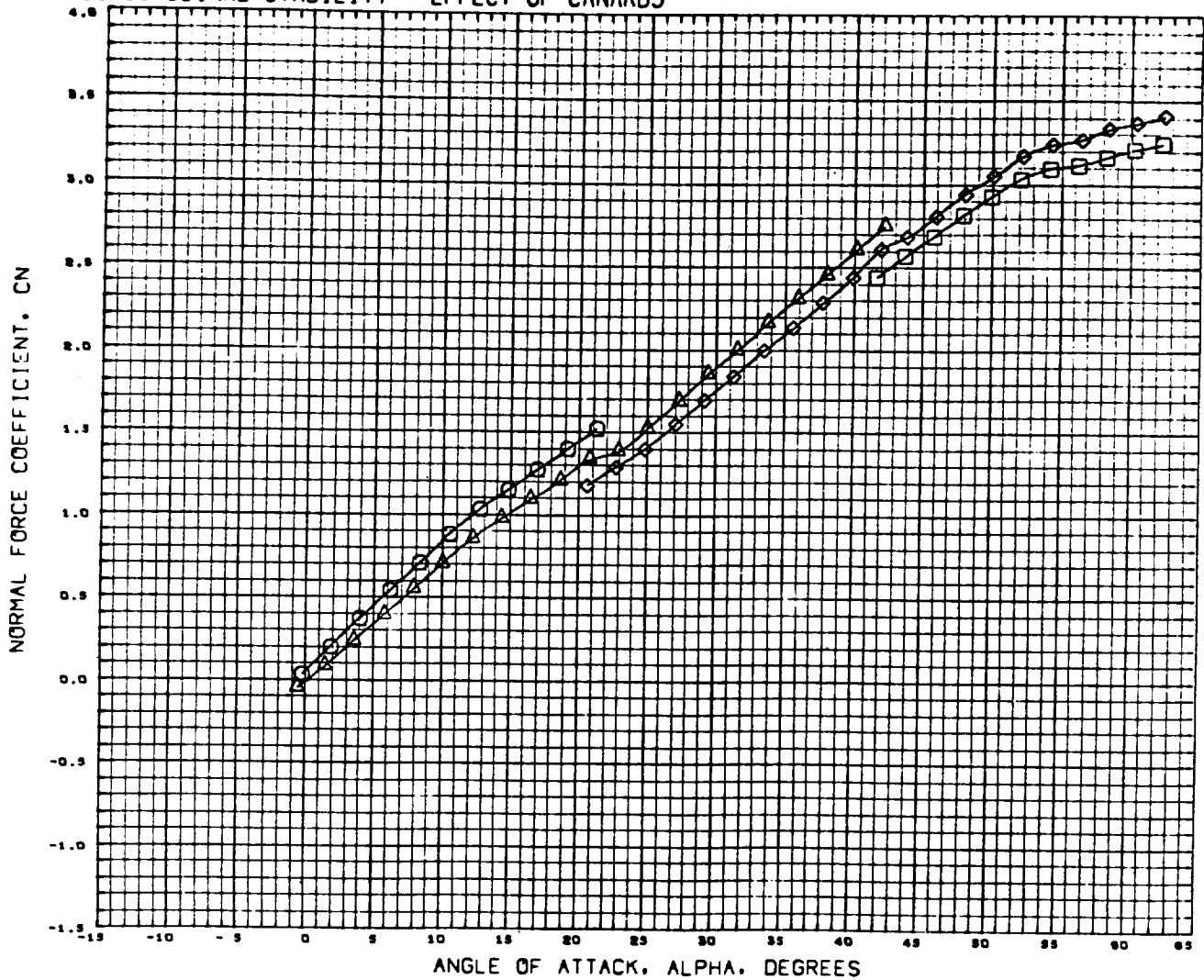
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSPC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SREF 4.6229 90. IN.
(F3818X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LRFP 1.5380 IN.
(F3819X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	SRFP 4.3000 IN.
(E3820K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.598

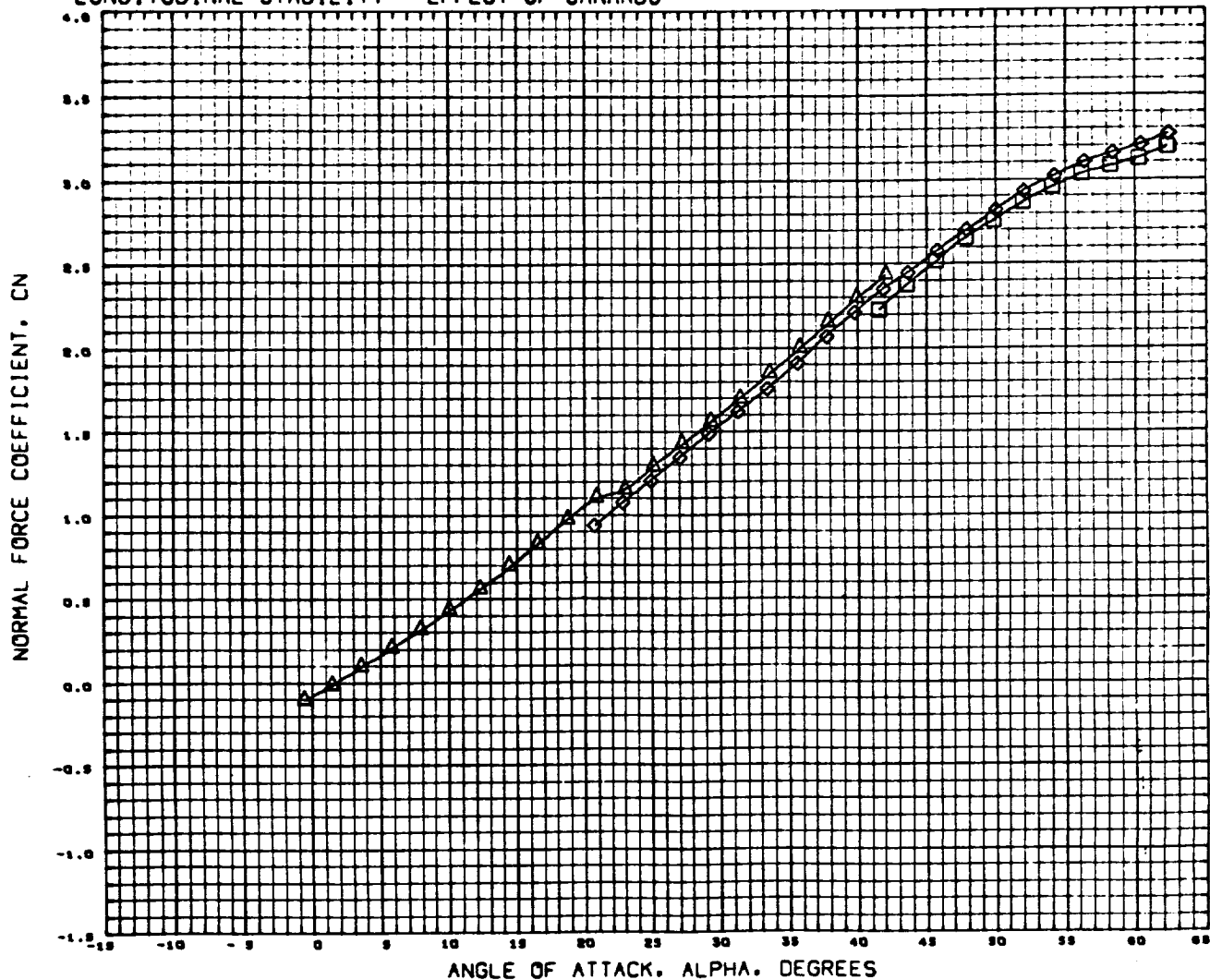
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

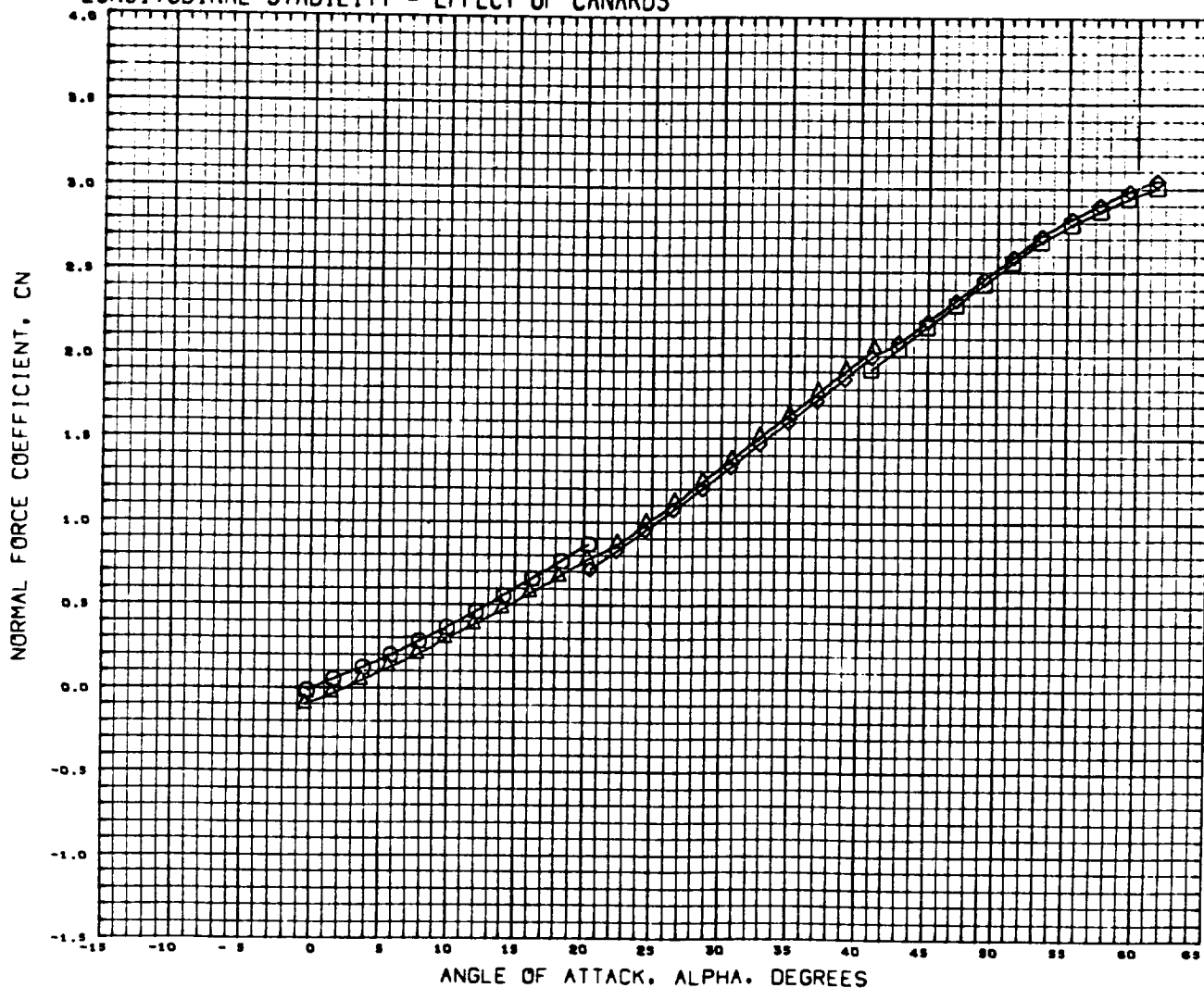
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREP 4.6225 30. IN.
(F3818X)	M496-N3PC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-20.000	LREP 1.3360 IN.
(F3819X)	M496-N3PC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	SREP 4.3000 IN.
(E3820K)	M496-N3PC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.933

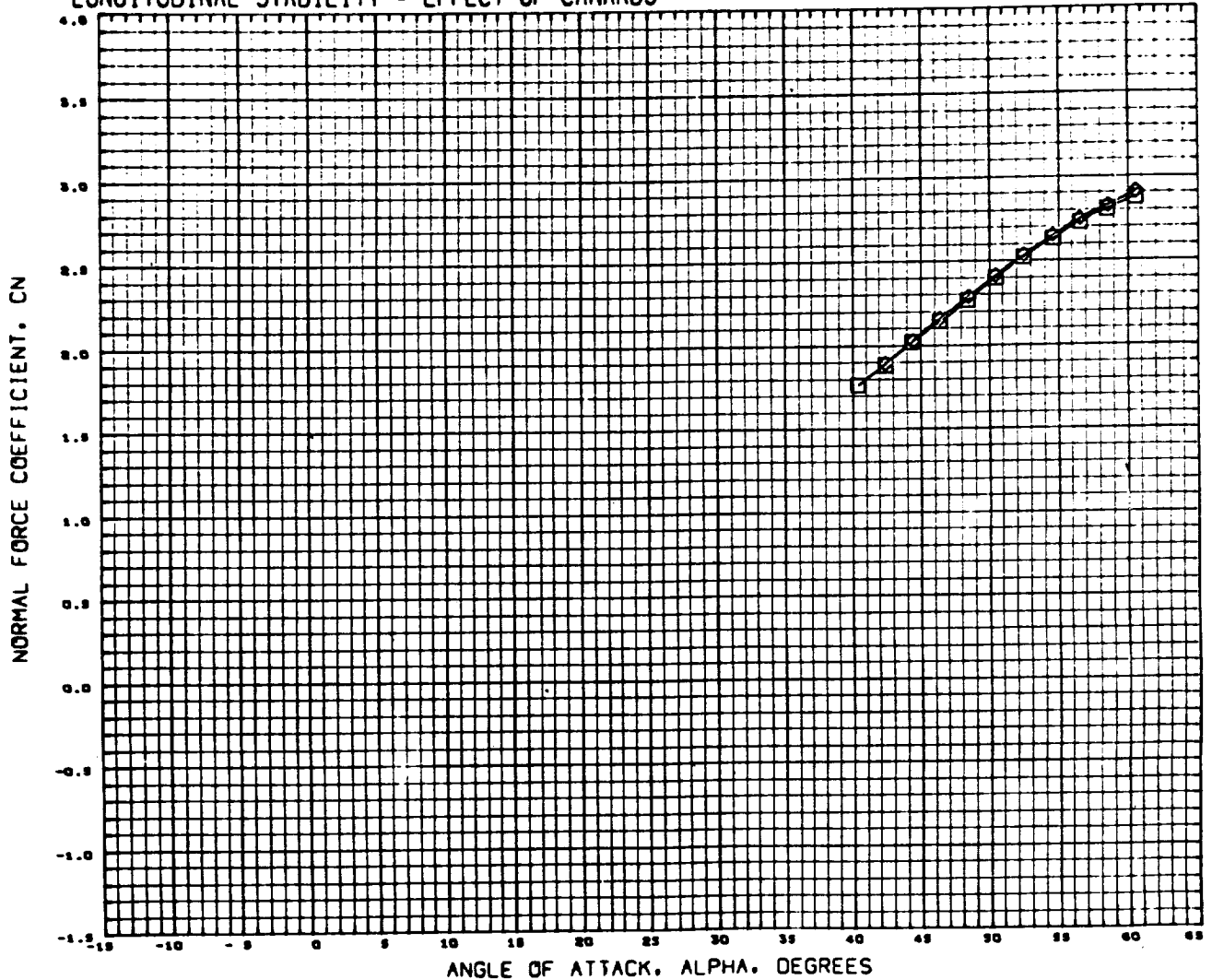
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3917A)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3919X)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3920K)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.480

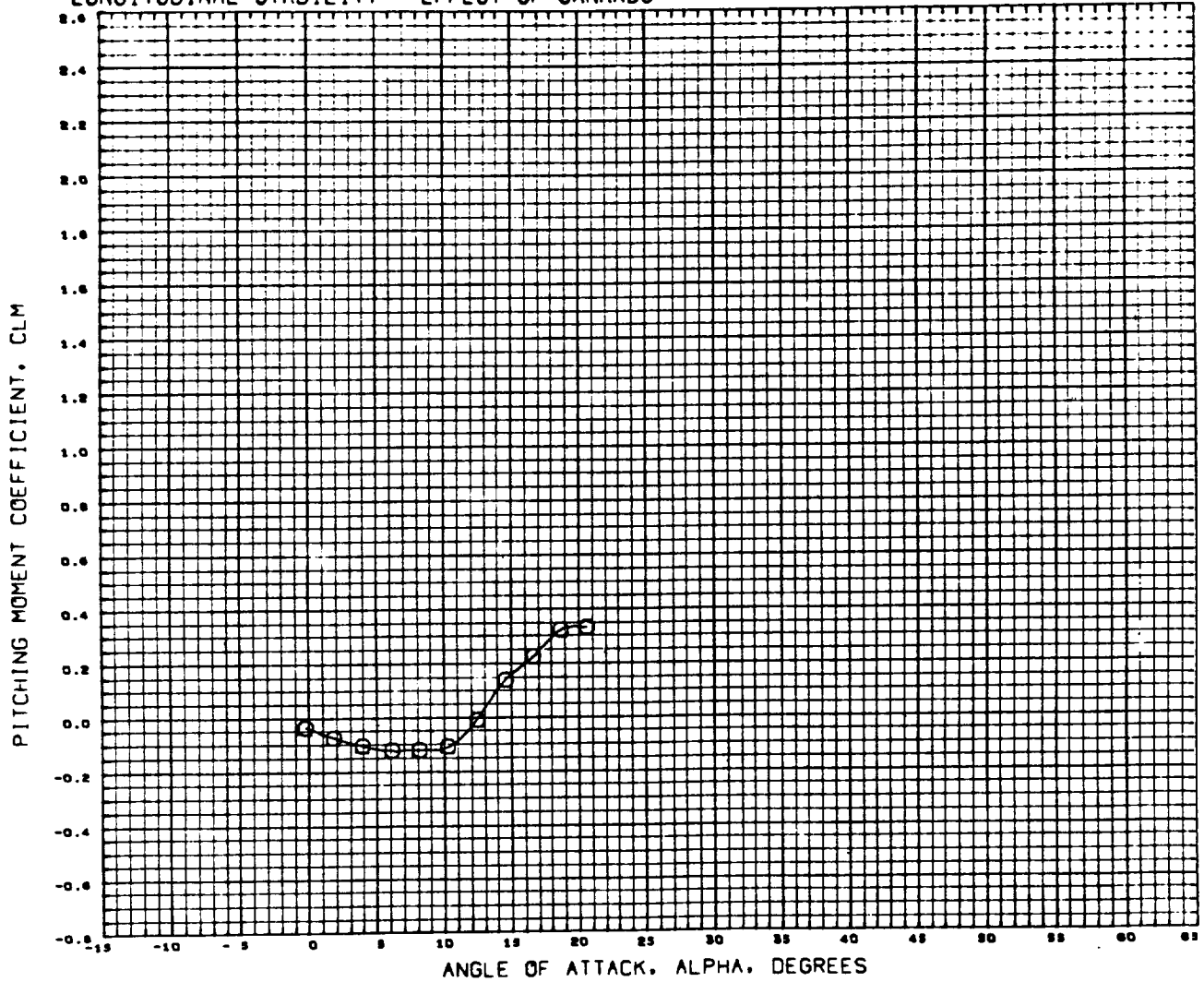
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3617A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.6225 SQ. IN.
(P3618X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF	1.5360 IN.
(P3619X)	M496-HSPC AR11961-3 MODEL W62C12V2	0.000	0.000	0.000	-40.000	BREF	4.3000 IN.
(E3620K)	M496-HSPC AR11961-3 MODEL W62C12V2	0.000	0.000	0.000	-60.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.959

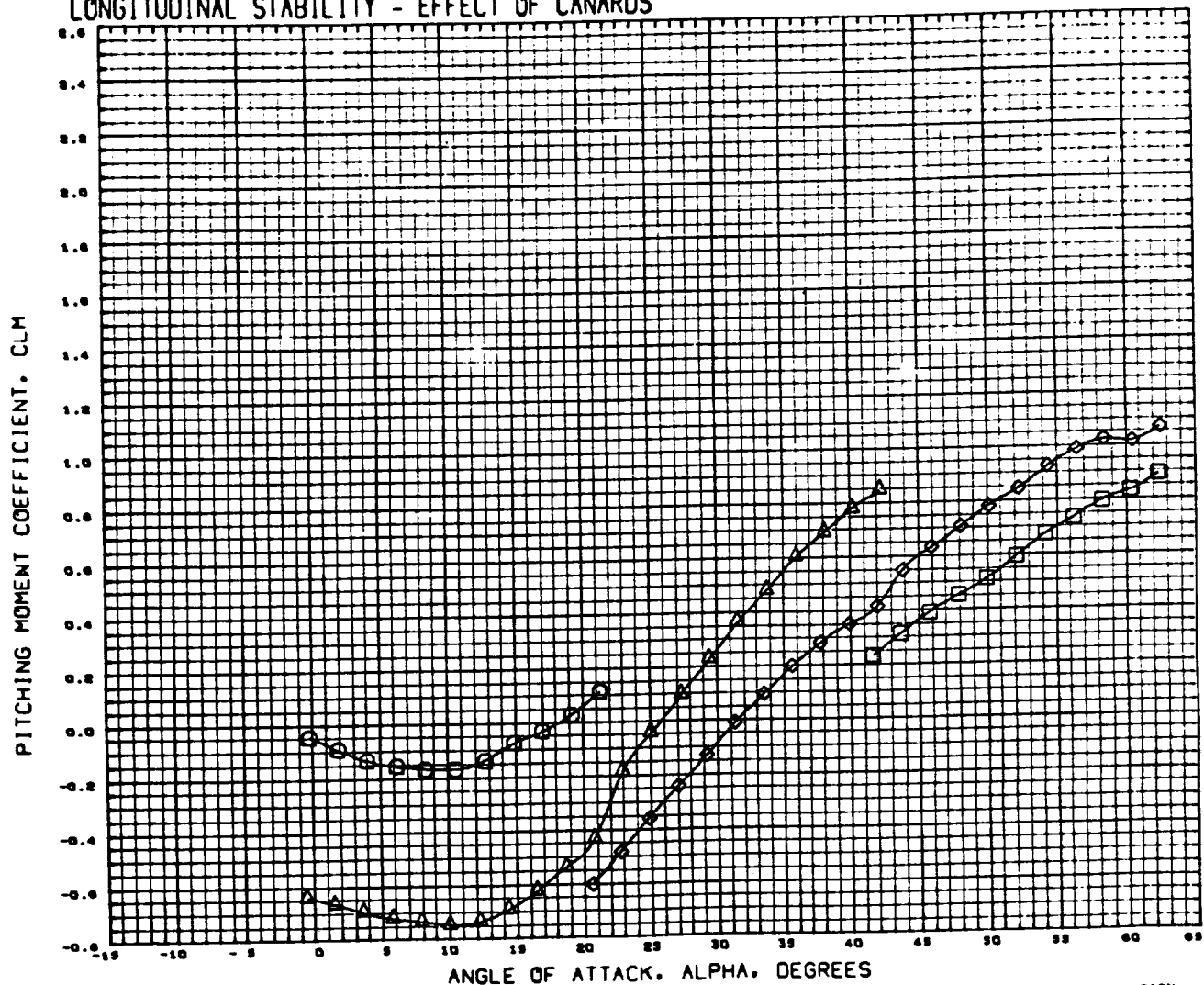
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3617A)	M496-MSFC AR1981-3 MODEL W6B2C12VZ	0.000	0.000	0.000	0.000	SREF	4.6225 50. IN.
(F3618X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF	1.5360 IN.
(F3619X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	BREF	4.3000 IN.
(E3620K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 0.595

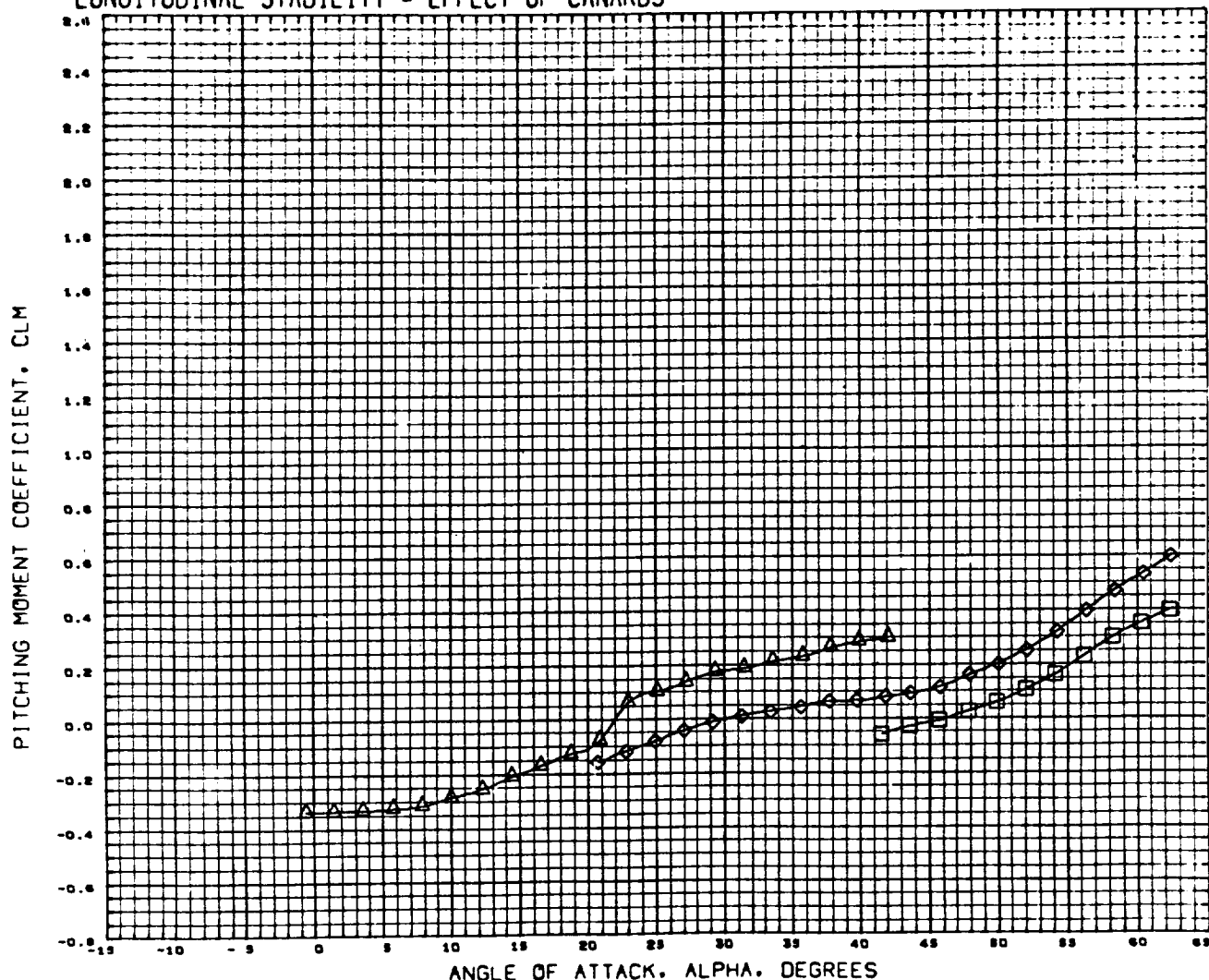
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3816X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(F3819X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XNRP 2.4000 IN.
						YNRP 0.0000 IN.
						SCALE 0.0025 IN.

MACH 1.197

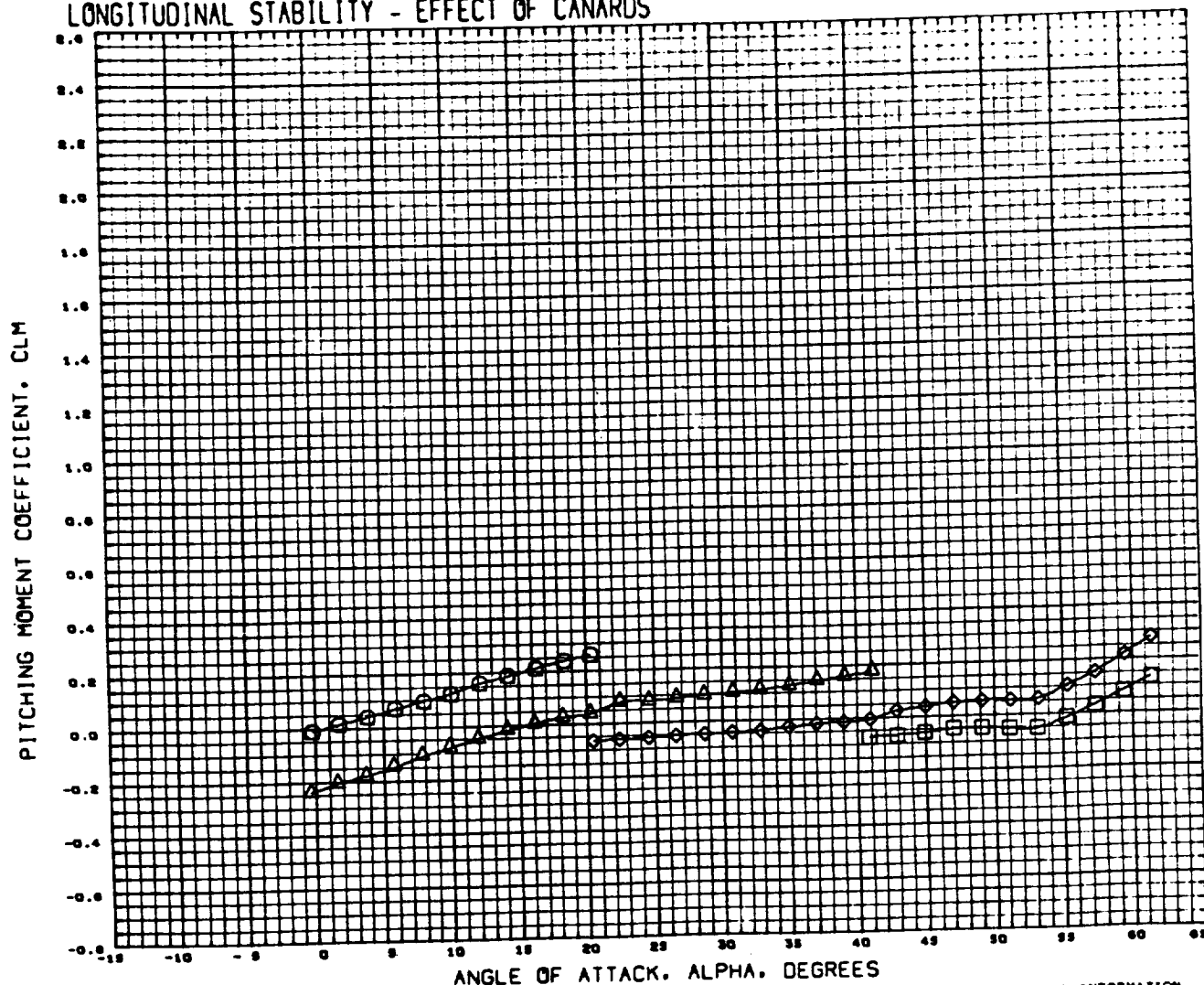
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 30. IN.
(F3818X)	M496-MSFC AR11981-3 MODEL W822C12V2	0.000	0.000	0.000	-20.000	LREF 1.9360 IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W822C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-MSFC AR11981-3 MODEL W822C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.953

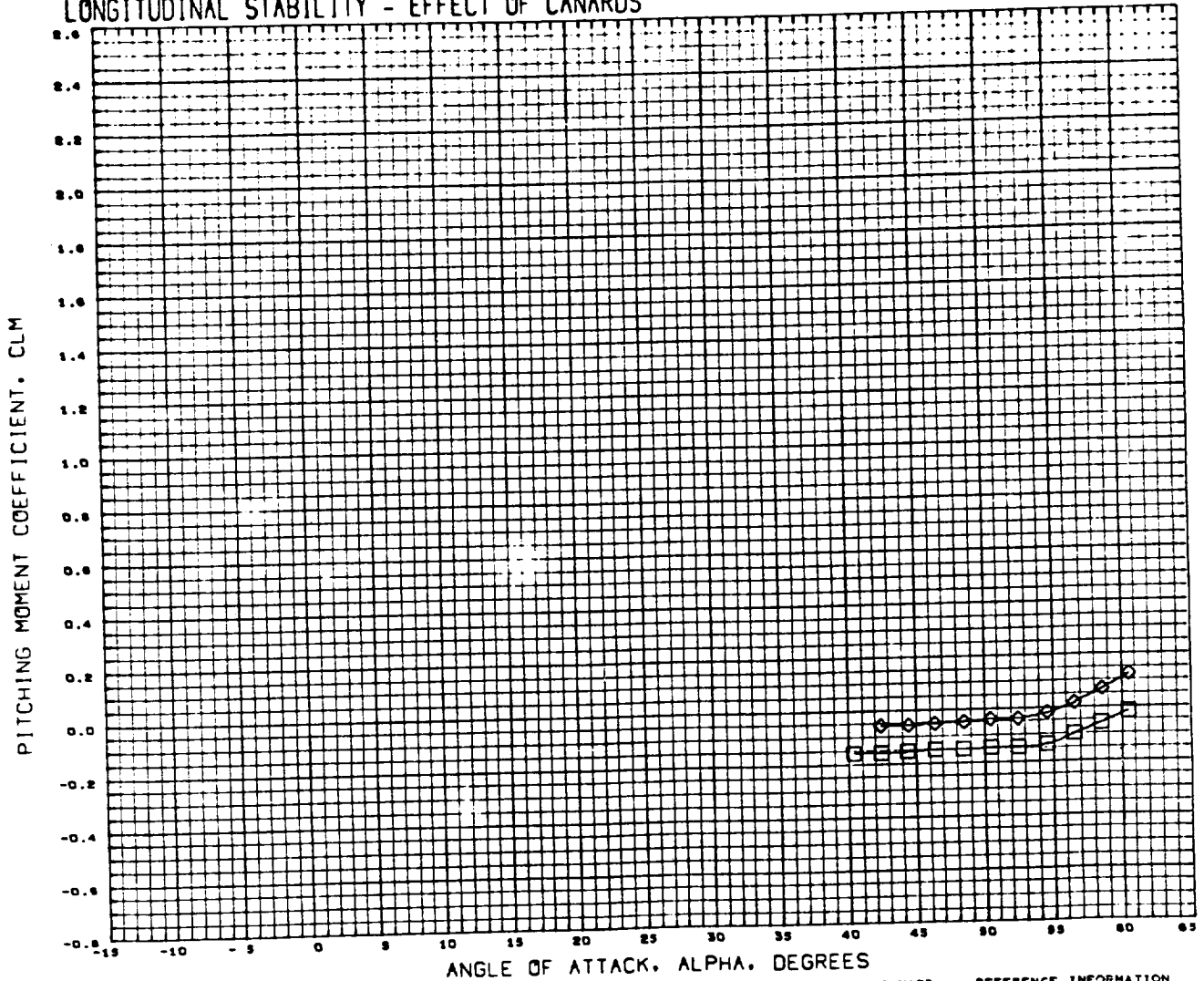
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3018X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3019X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.460

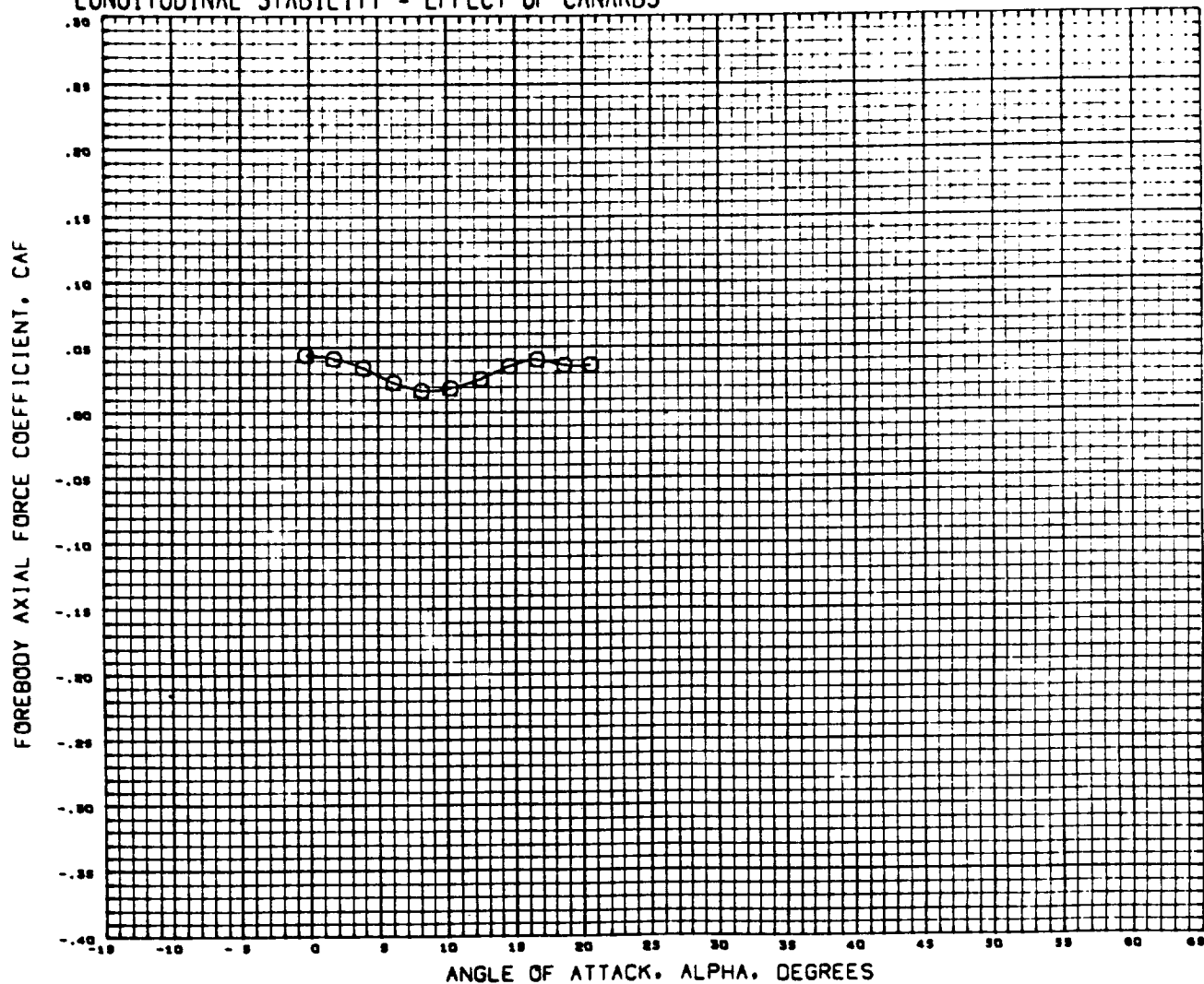
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 50.1N.
(F3018X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(F3019X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023

MACH 4.959

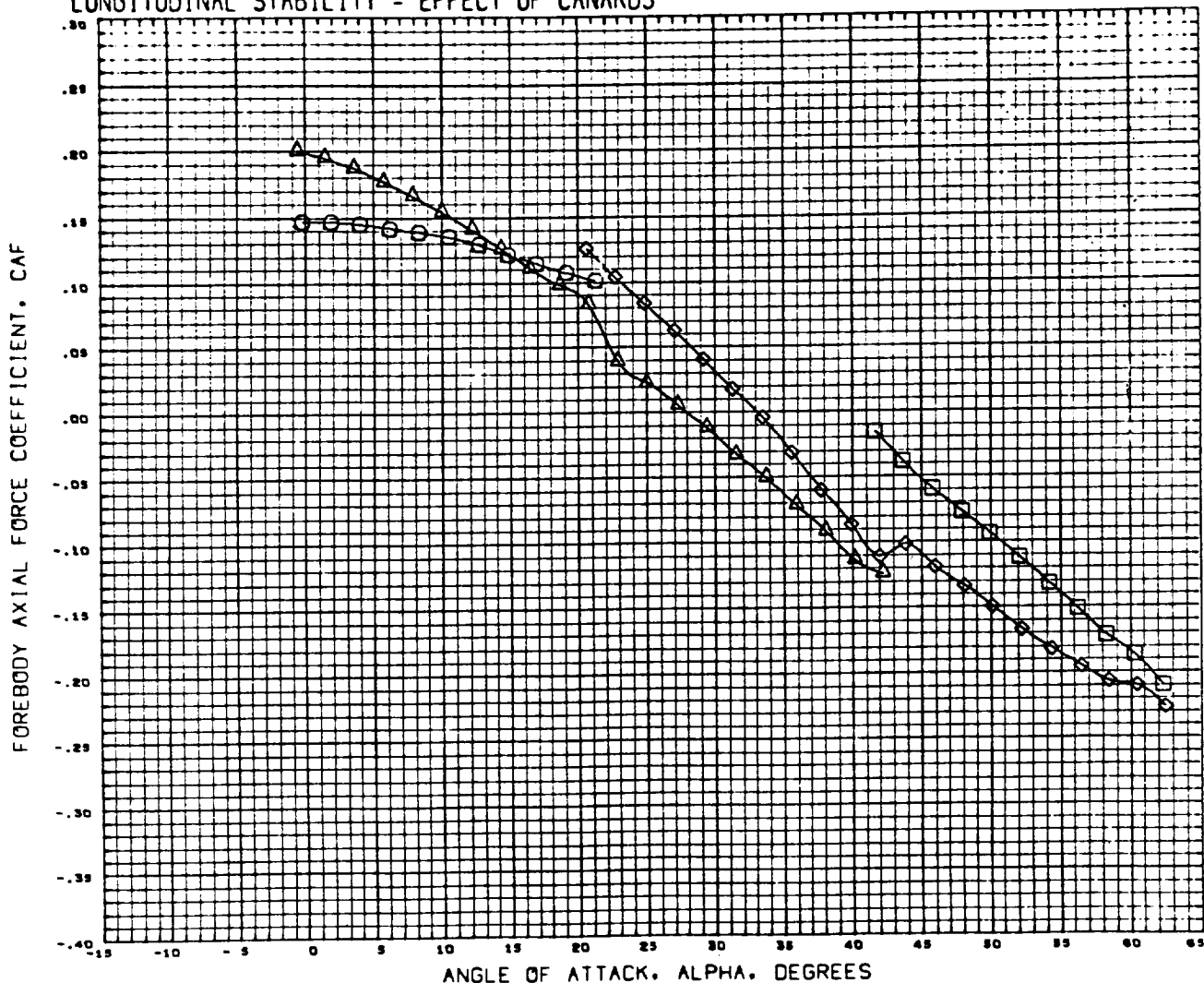
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATTNOM	CANARD	REFERENCE INFORMATION
(E3017A)	M498-HSFC AR11901-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6229 SQ. IN.
(F3018X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(F3019X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0029

MACH 0.590

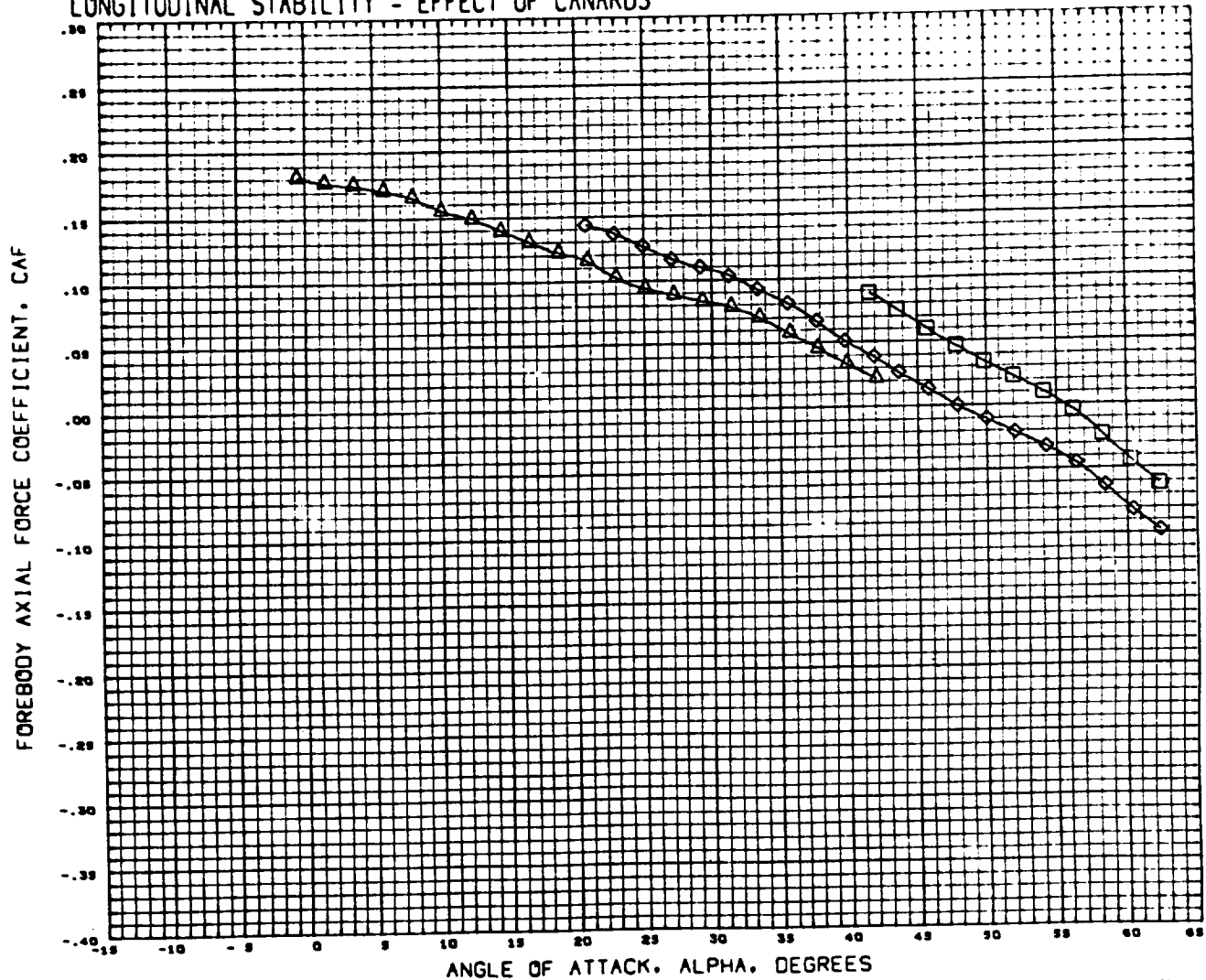
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	ATTORN	CANARD	REFERENCE INFORMATION
(E3817A)	○	M496-MSFC	AR11981-3 MODEL	W6B2C12V2	0.000	0.000	0.000	BREF 4.6225 SQ. IN.
(F3818X)	△	M496-MSFC	AR11981-3 MODEL	W6B2C12V2	0.000	0.000	-20.000	LREF 1.9360 IN.
(F3819X)	◇	M496-MSFC	AR11981-3 MODEL	W6B2C12V2	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	□	M496-MSFC	AR11981-3 MODEL	W6B2C12V2	0.000	0.000	-60.000	XMRP 2.4000 IN.
								YMRP 0.0000 IN.
								ZMRP 0.0000 IN.
								SCALE 0.0025

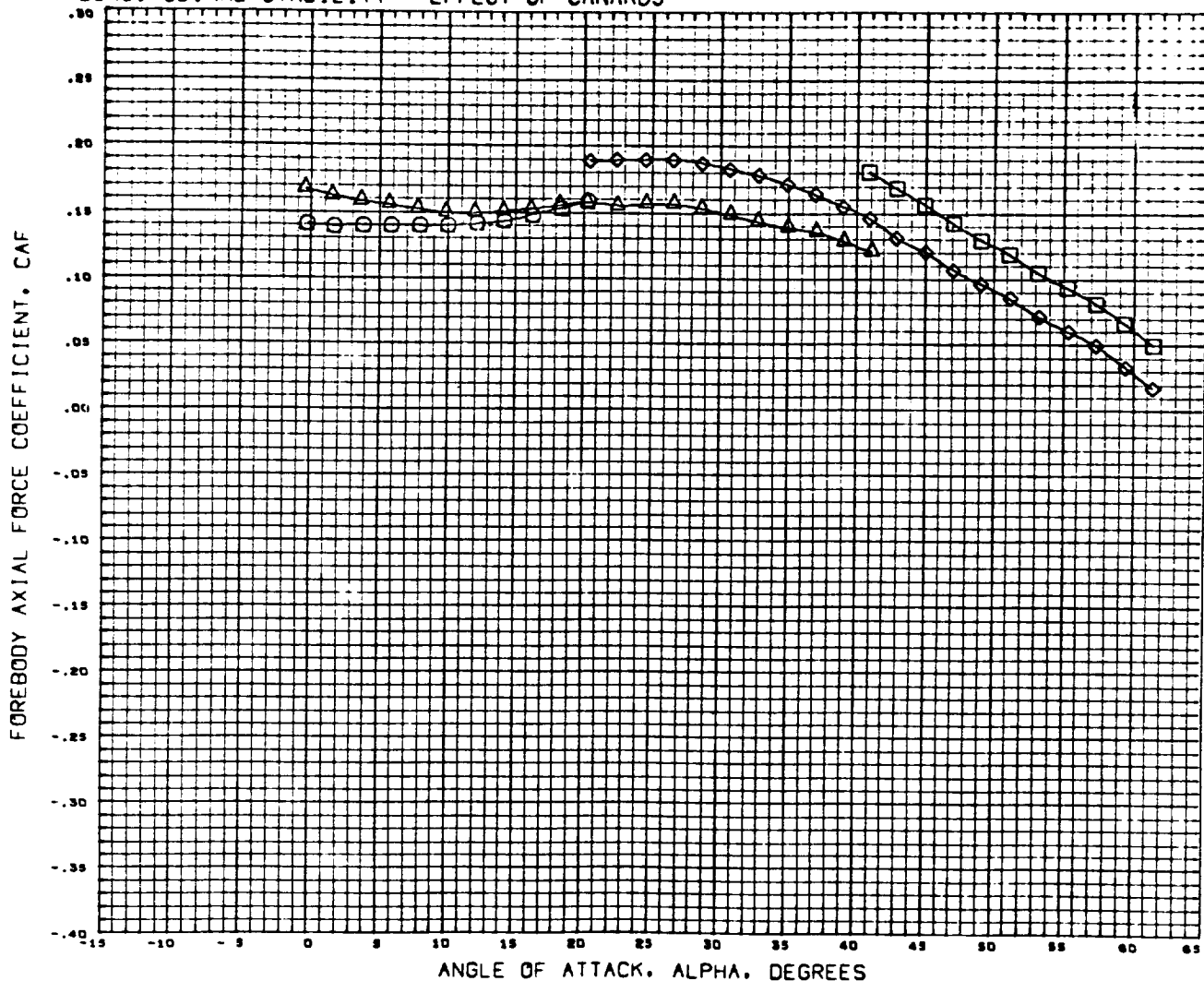
MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3617A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREP	4.6225 SQ. IN.
(F3618X)	M496-MSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-20.000	LREF	1.5360 IN.
(F3619K)	M496-MSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	BREF	4.3000 IN.
(E3620K)	M496-MSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	YMRP	2.4000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025
MACH 1.993							

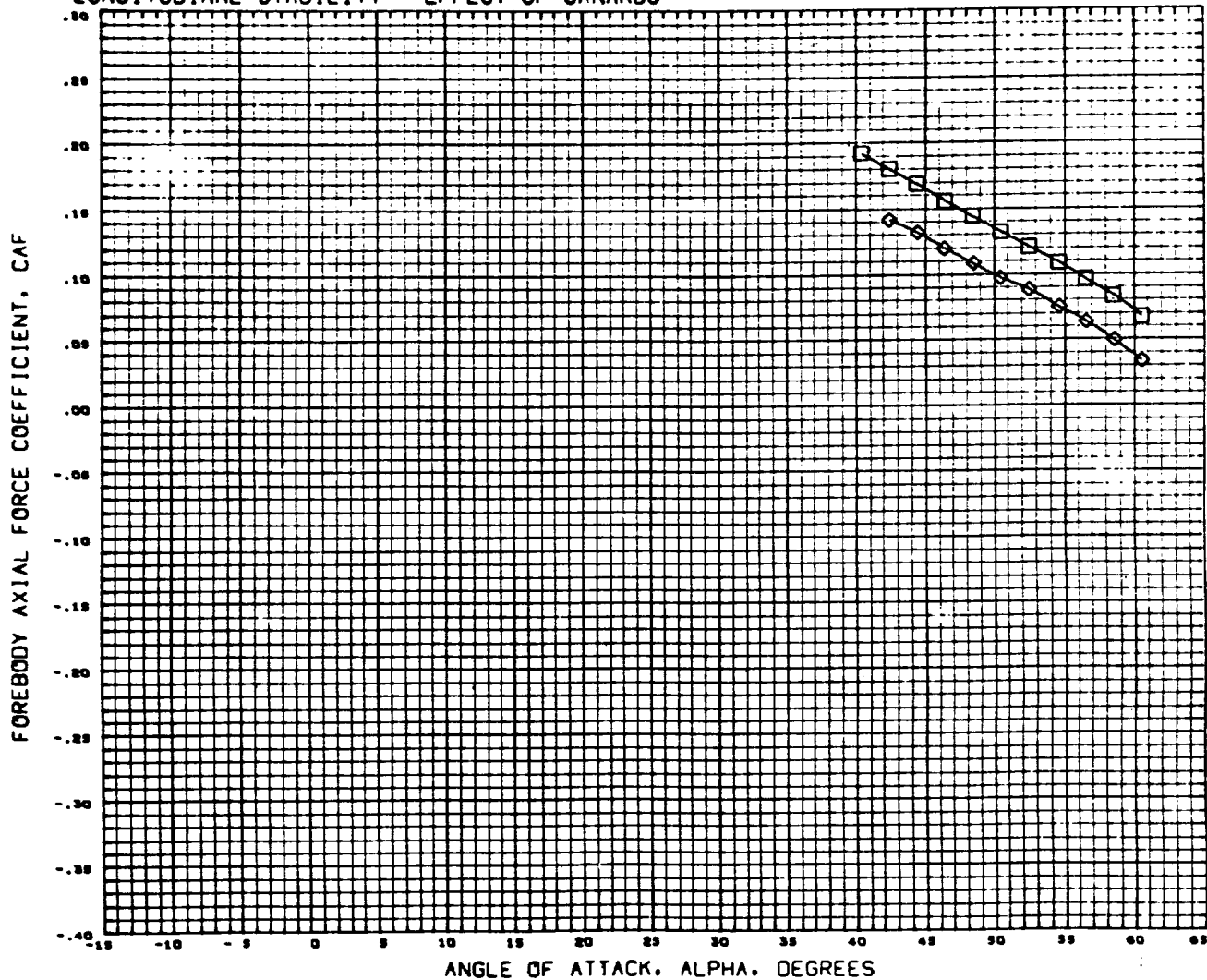
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3917A)	○	M496-MSFC AR11991-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3918X)	△	M496-MSFC AR11991-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3919X)	◇	M496-MSFC AR11991-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3920K)	□	M496-MSFC AR11991-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	KMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 3.480

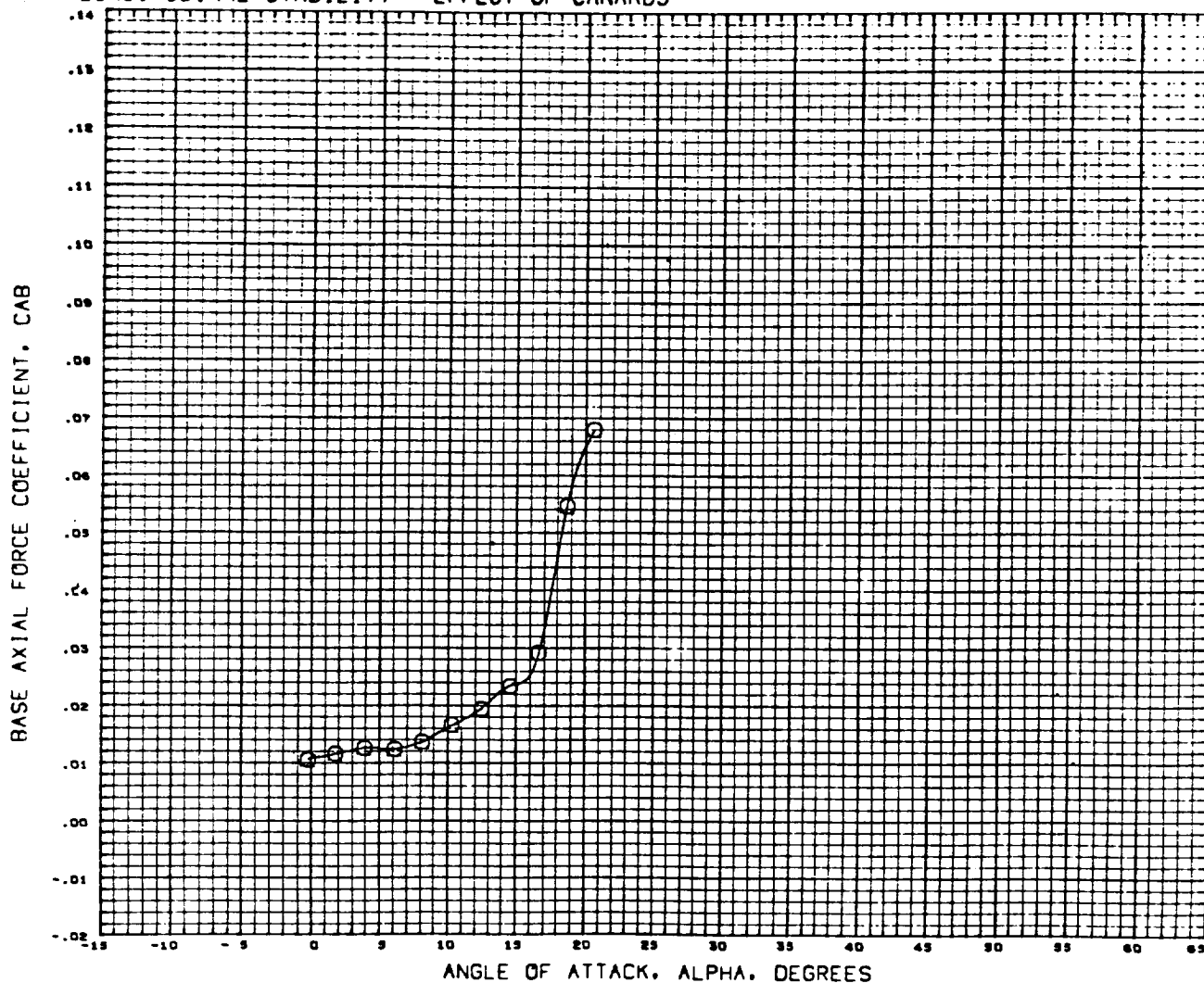
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6229 50. IN.
(F3018X)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3019X)	◇	H496-MSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020X)	□	H496-MSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 4.959

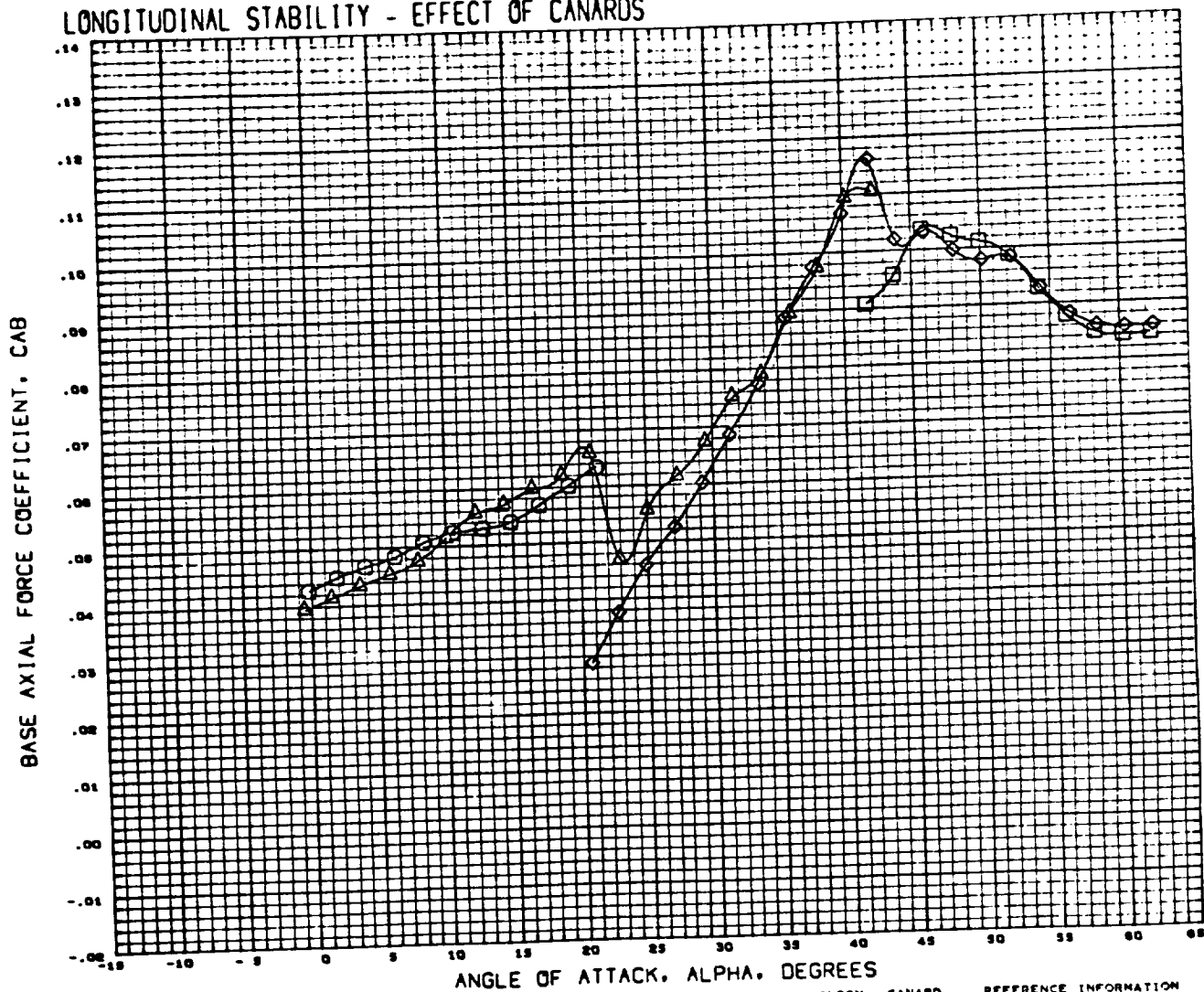
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	○	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	◇	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 0.598

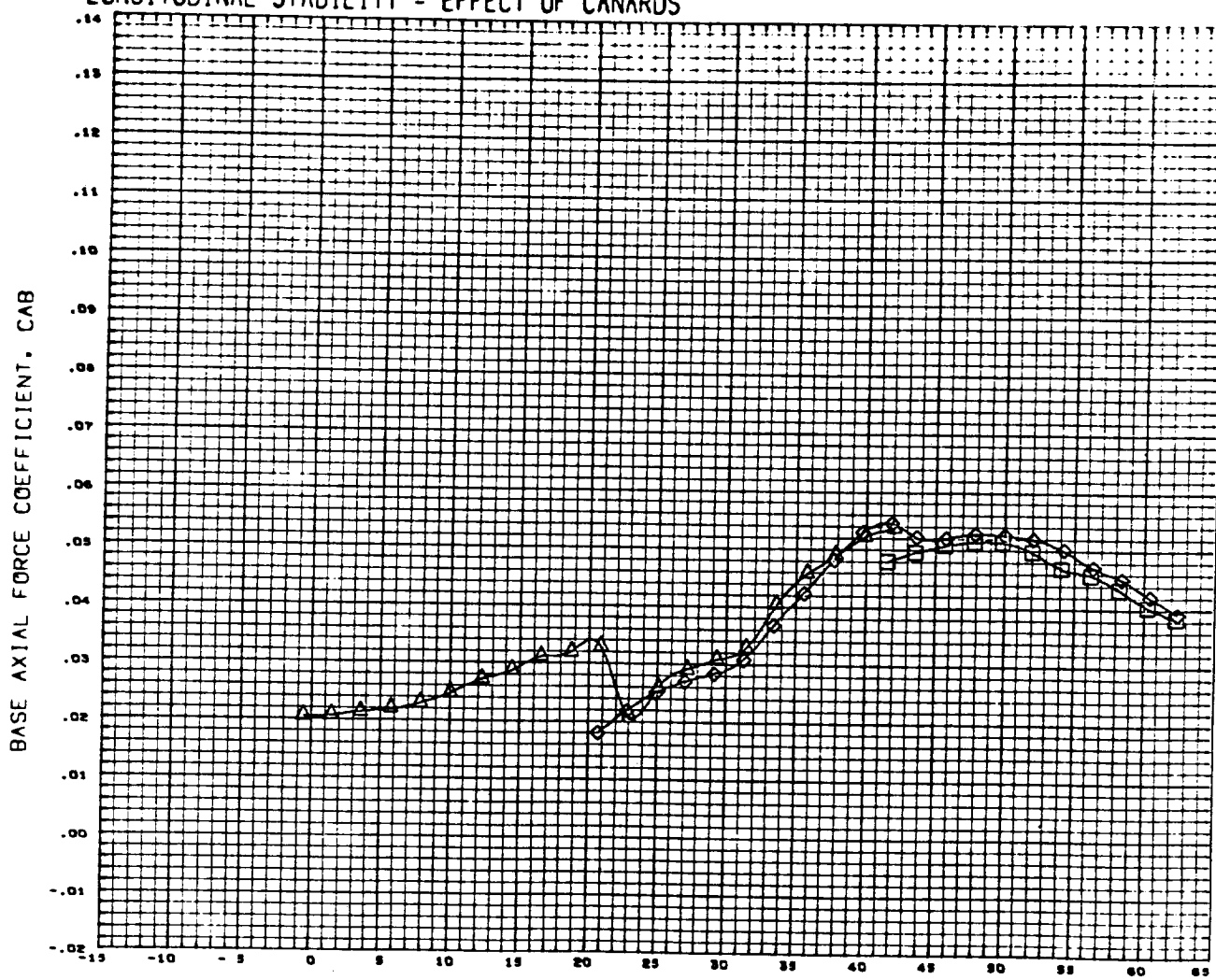
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3417A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(P3816X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(P3819X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3420K)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

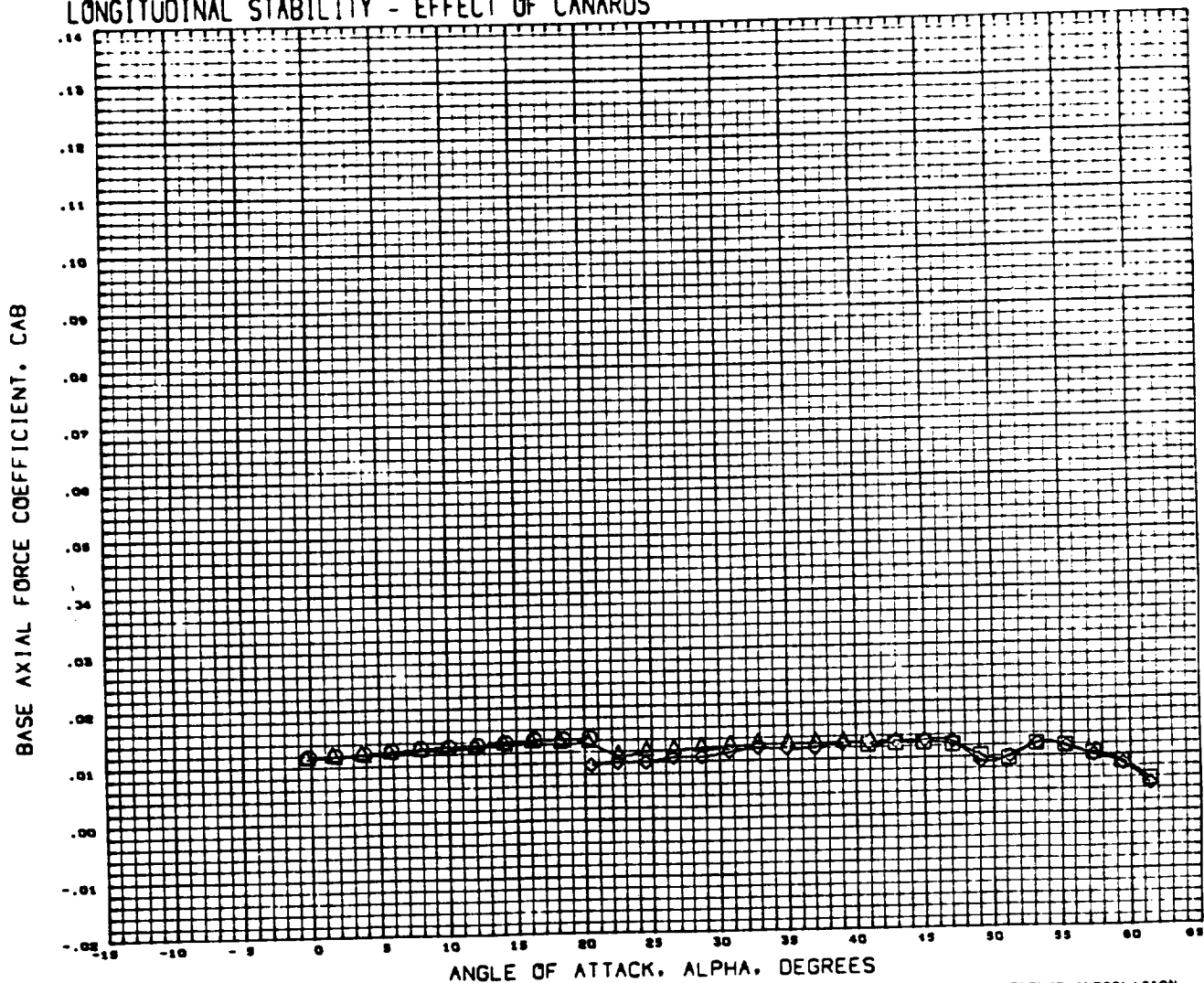
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	M496-MSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820X)	M496-MSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.953

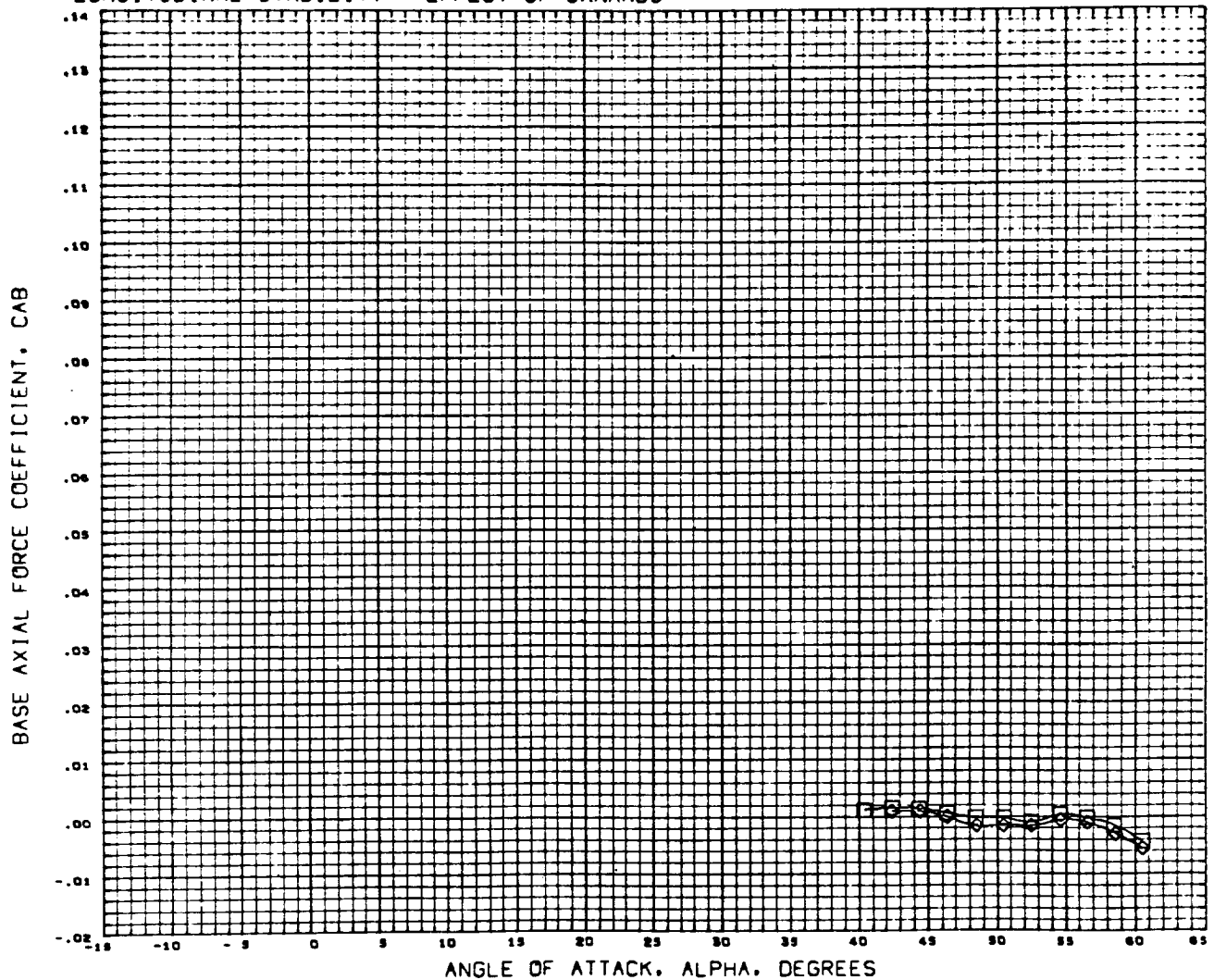
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	○	M496-HSFC AR11901-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.8225 SQ. IN.
(F3018X)	△	M496-HSFC AR11901-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(F3019X)	◇	M496-HSFC AR11901-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020K)	□	M496-HSFC AR11901-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	YNRP 2.4000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 3.400

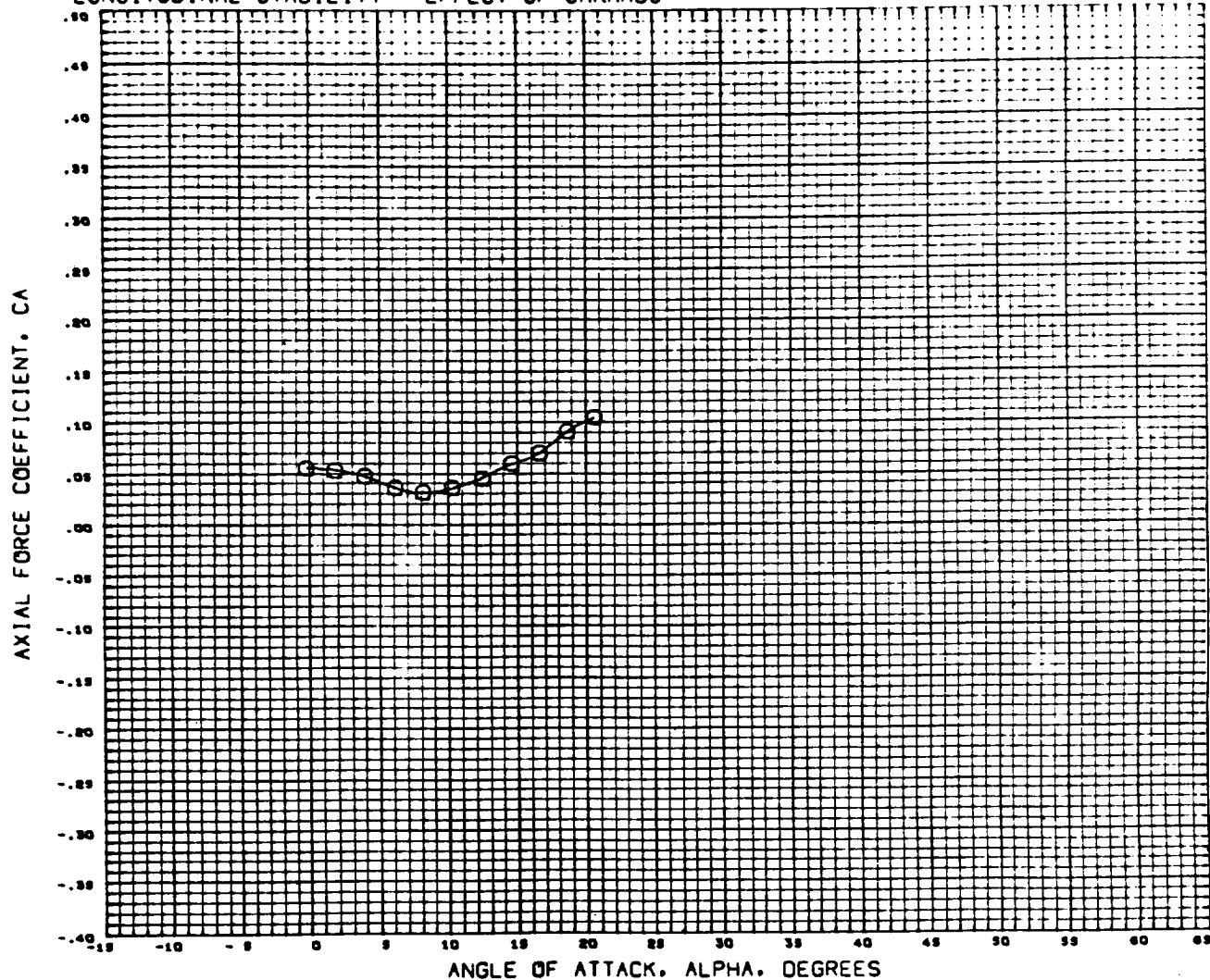
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3617A)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.6225 30 IN.
(F3618X)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF	1.5360 1N.
(F3619X)	◇	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF	4.3000 1N.
(E3620K)	□	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP	2.4000 1N.
							YMRP	0.0000 1N.
							ZMRP	0.0000 1N.
							SCALE	0.0025

MACH 4.959

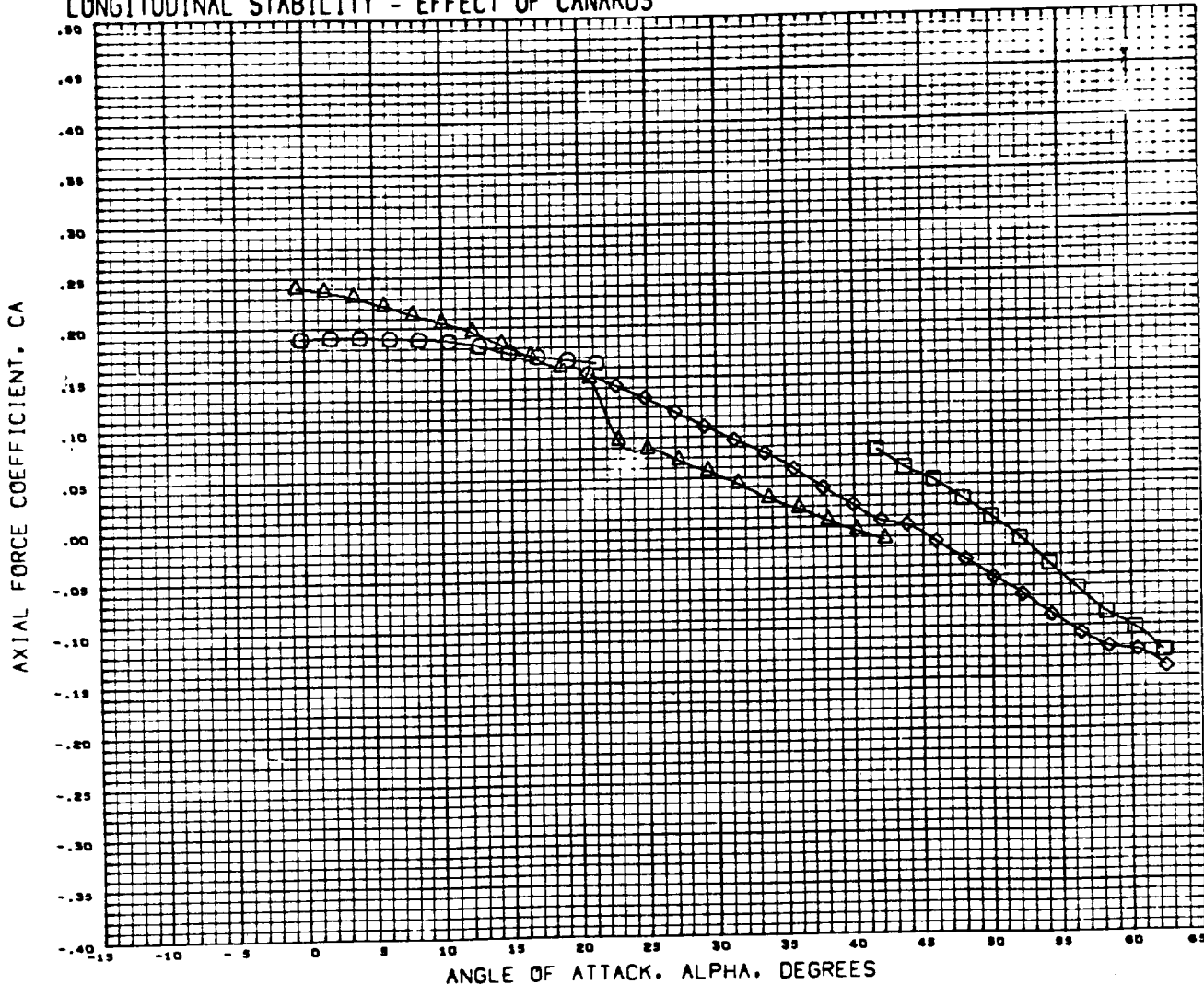
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-MSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.596

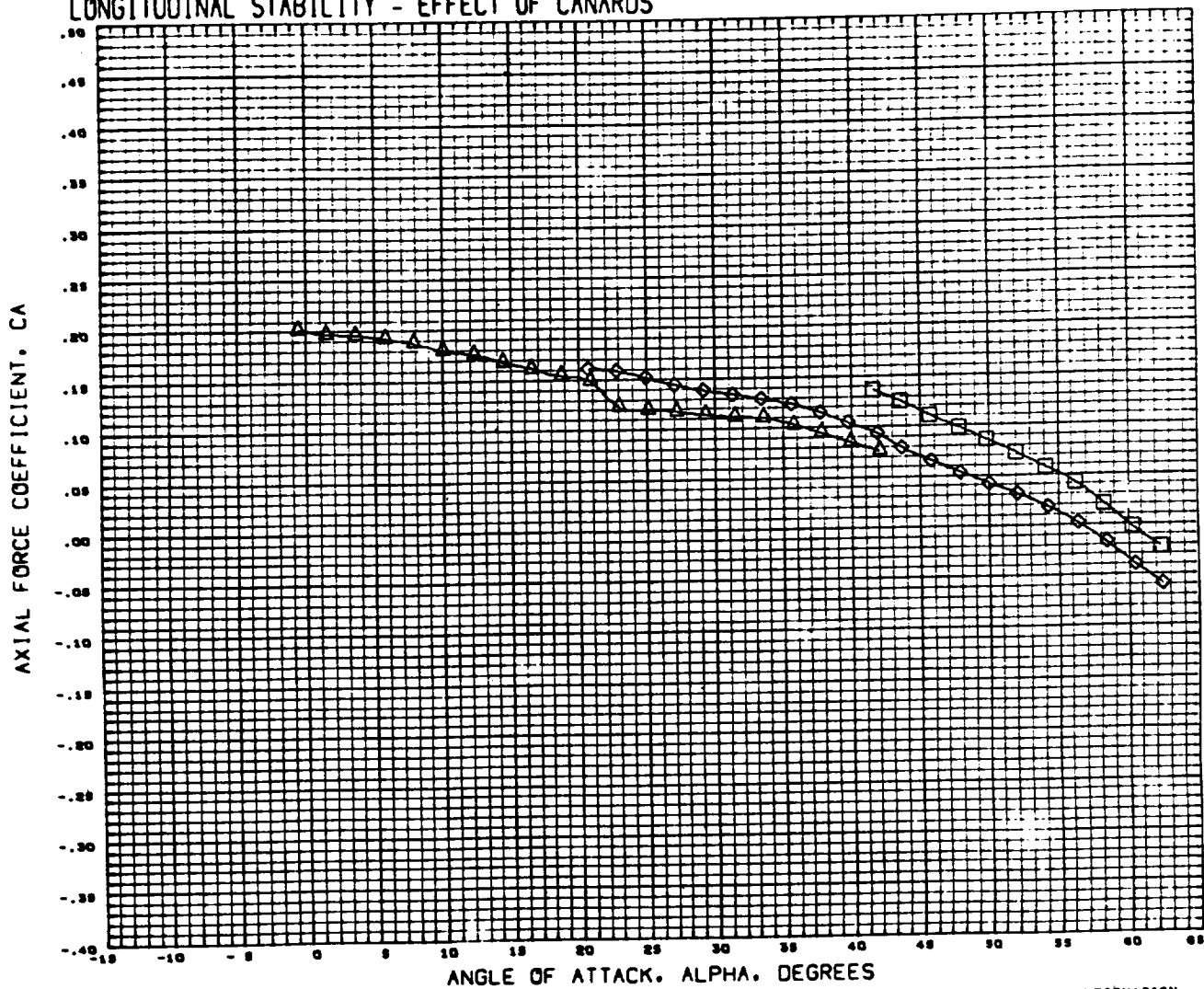
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AI'RON	CANARD	REFERENCE INFORMATION
(E3617A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3618X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3619X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3620K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

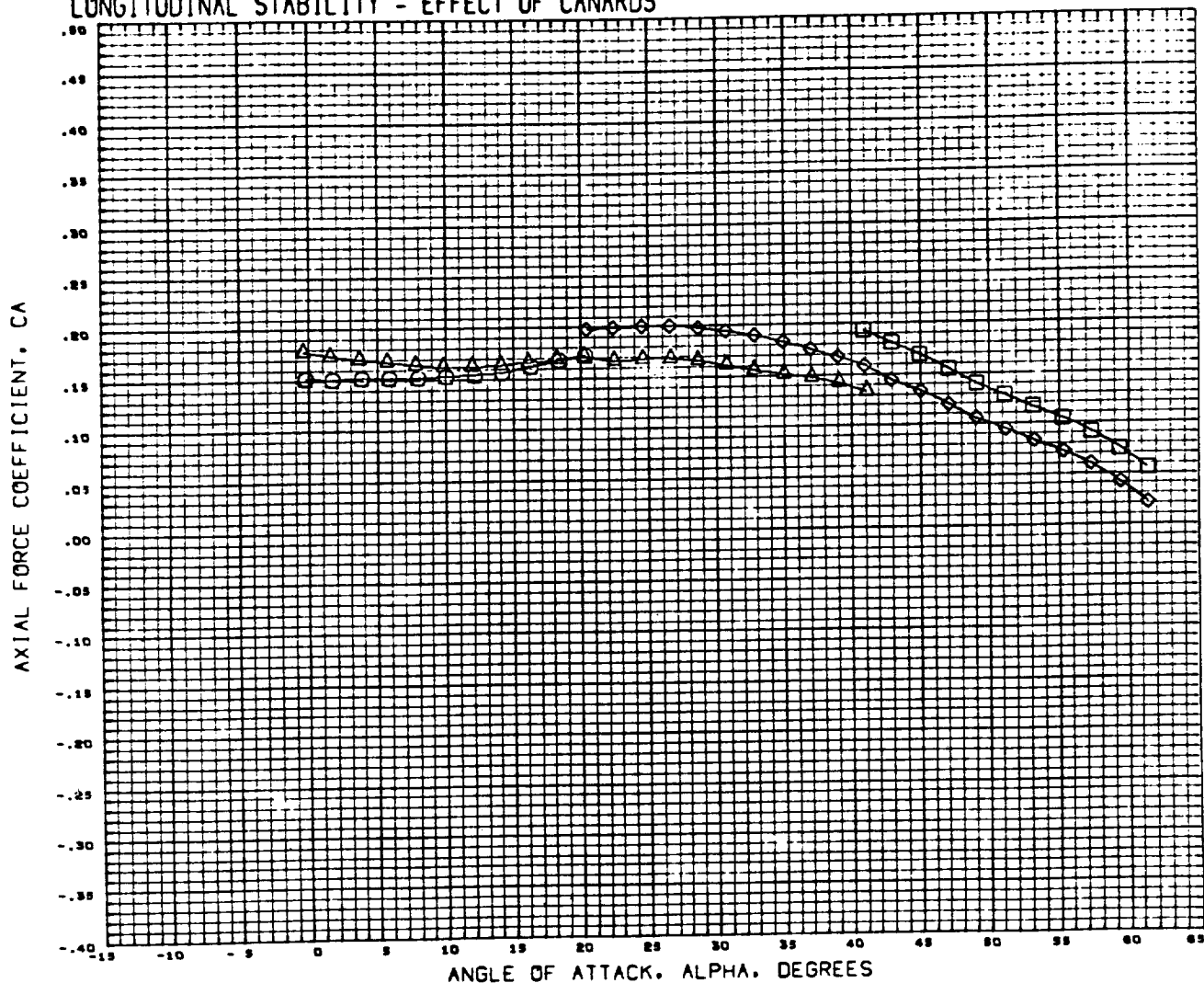
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 sq. in.
(F3018X)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 in.
(F3019X)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 in.
(E3020K)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

MACH 1.953

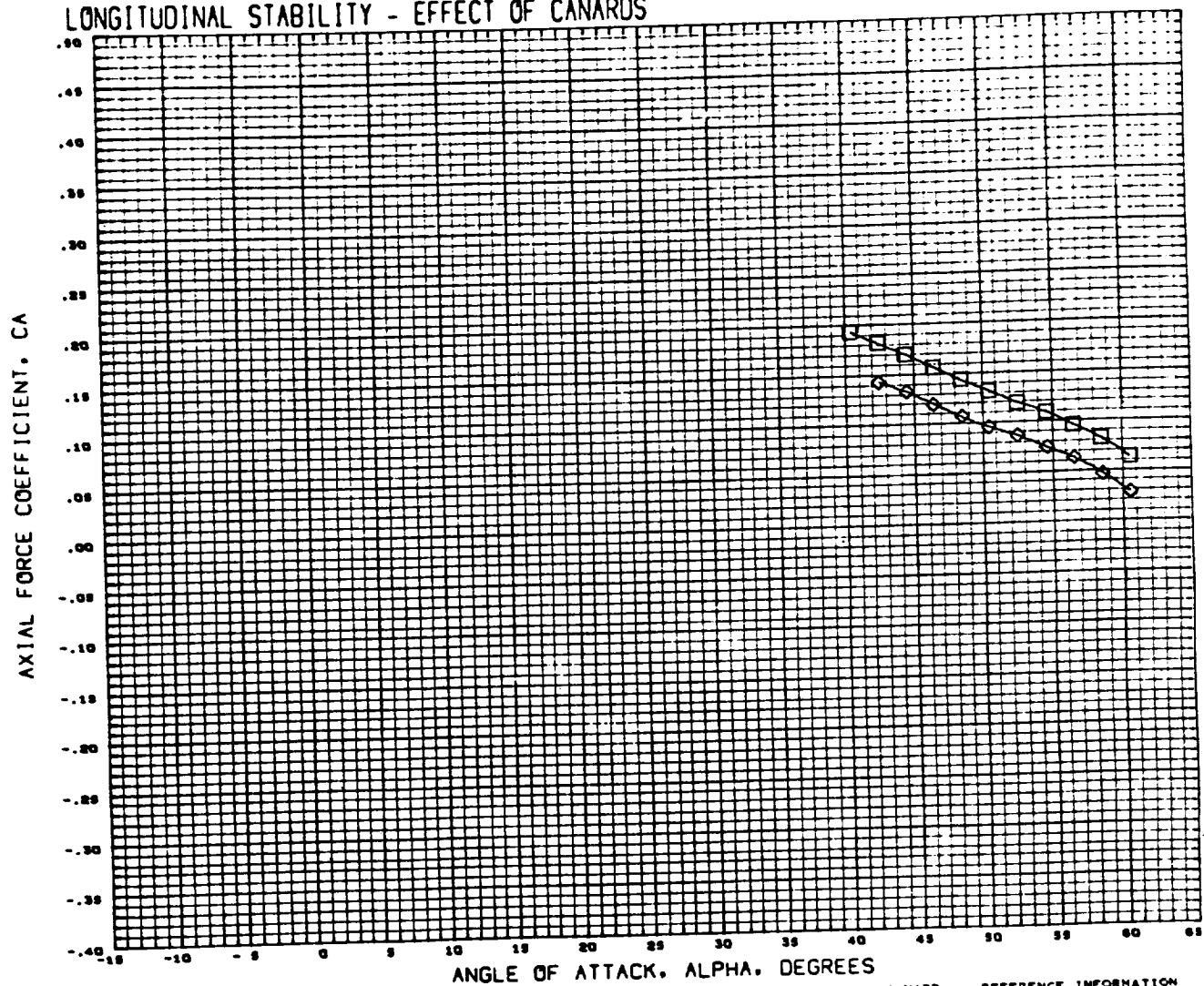
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3817A)	○	M496-MSFC	AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF	4.6225 SQ. IN.
(F3818X)	△	M496-MSFC	AR11981-3 MODEL	0.000	0.000	0.000	-20.000	LREF	1.5360 IN.
(F3819X)	◇	M496-MSFC	AR11981-3 MODEL	0.000	0.000	0.000	-40.000	BREF	4.3000 IN.
(E3820K)	□	M496-MSFC	AR11981-3 MODEL	0.000	0.000	0.000	-60.000	XMRP	2.4000 IN.
								YMRP	0.0000 IN.
								ZMRP	0.0000 IN.
								SCALE	0.0025

MACH 3.480

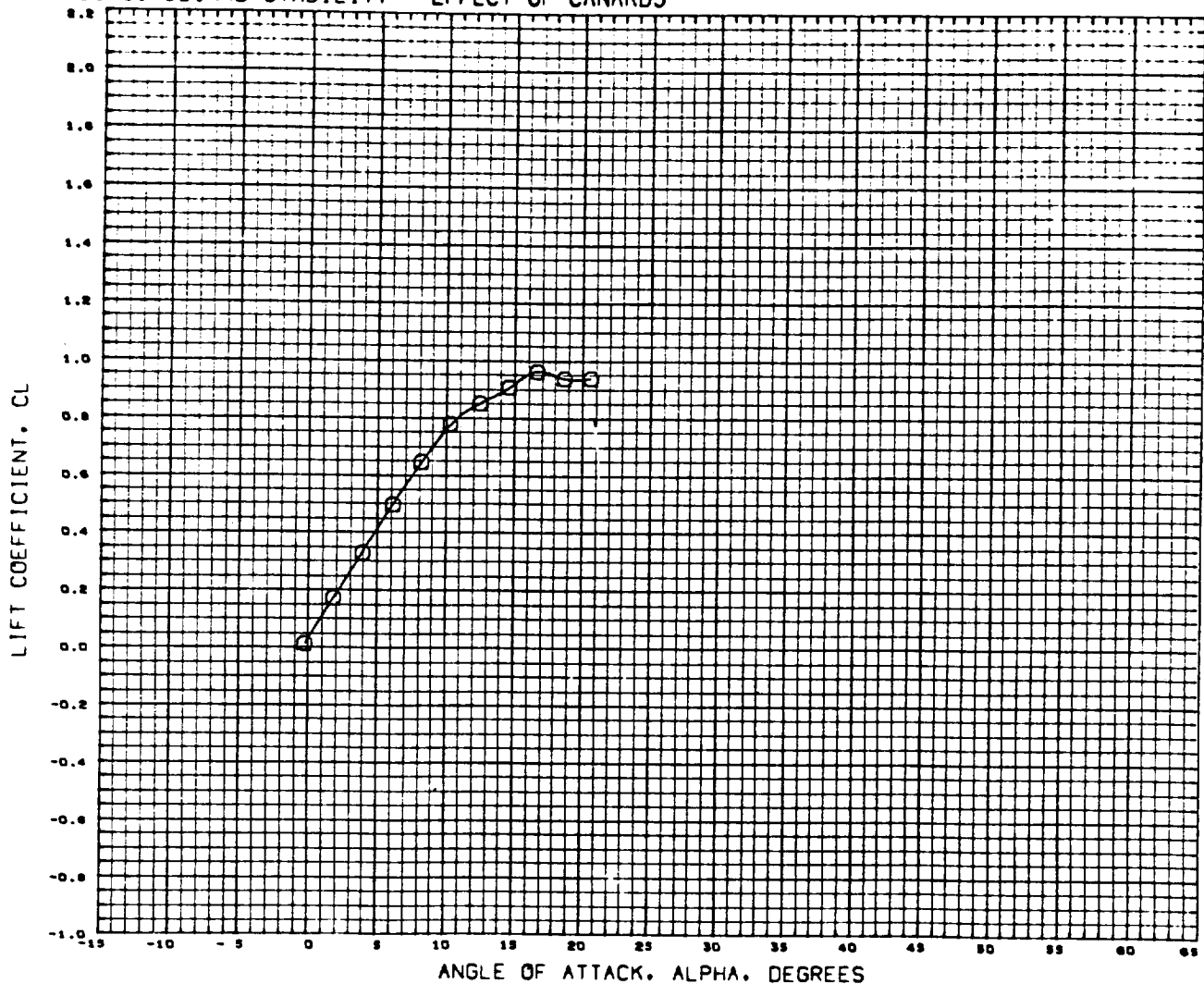
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREP 4.6225 SQ. IN.
(F3818X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREP 1.5360 IN.
(F3819X)	H496-MSFC AR11981-3 MODEL W88C12V2	0.000	0.000	0.000	-40.000	BREP 4.5000 IN.
(E3420K)	H496-MSFC AR11981-3 MODEL W88C12V2	0.000	0.000	0.000	-60.000	YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 4.959

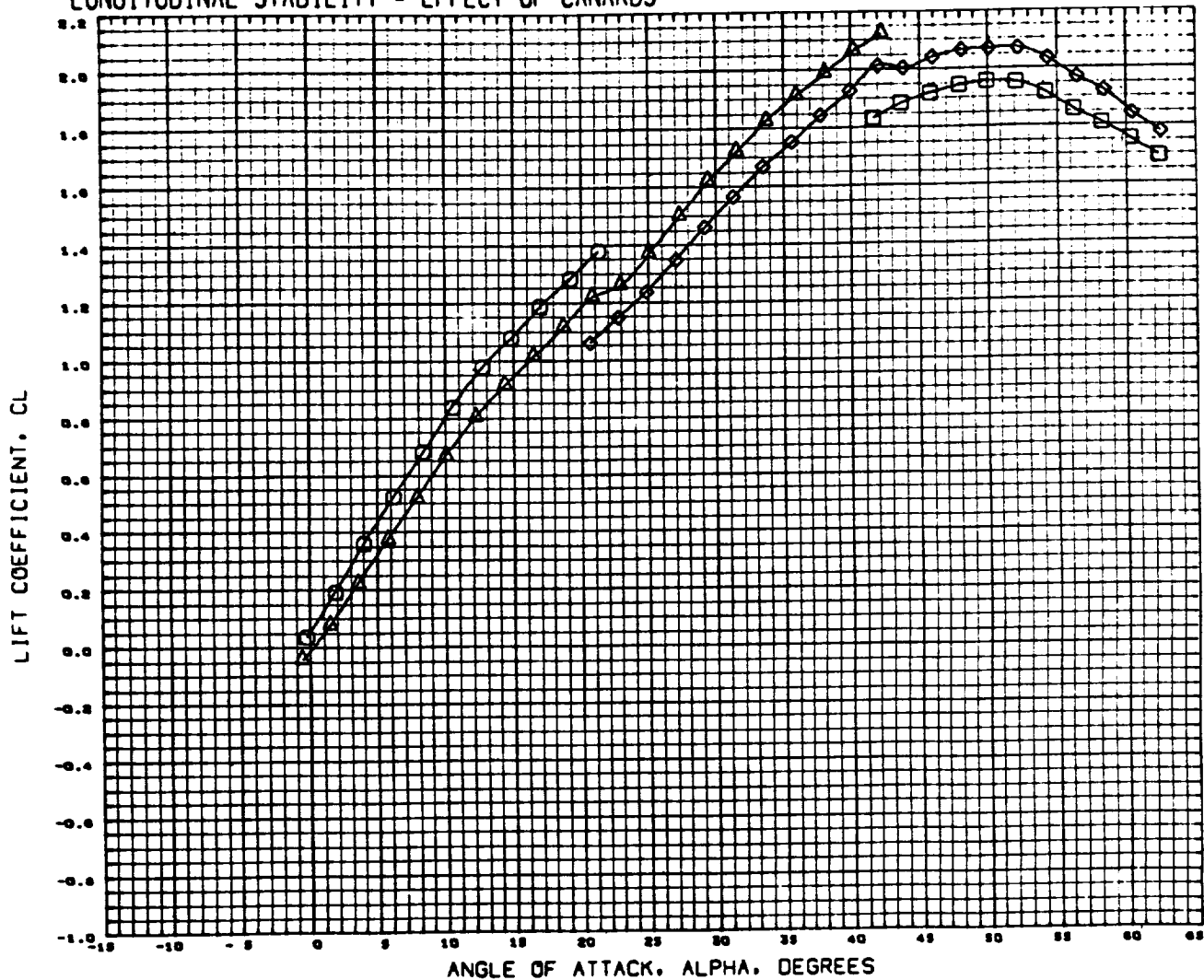
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 30.IN.
(F3818X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3420K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.998

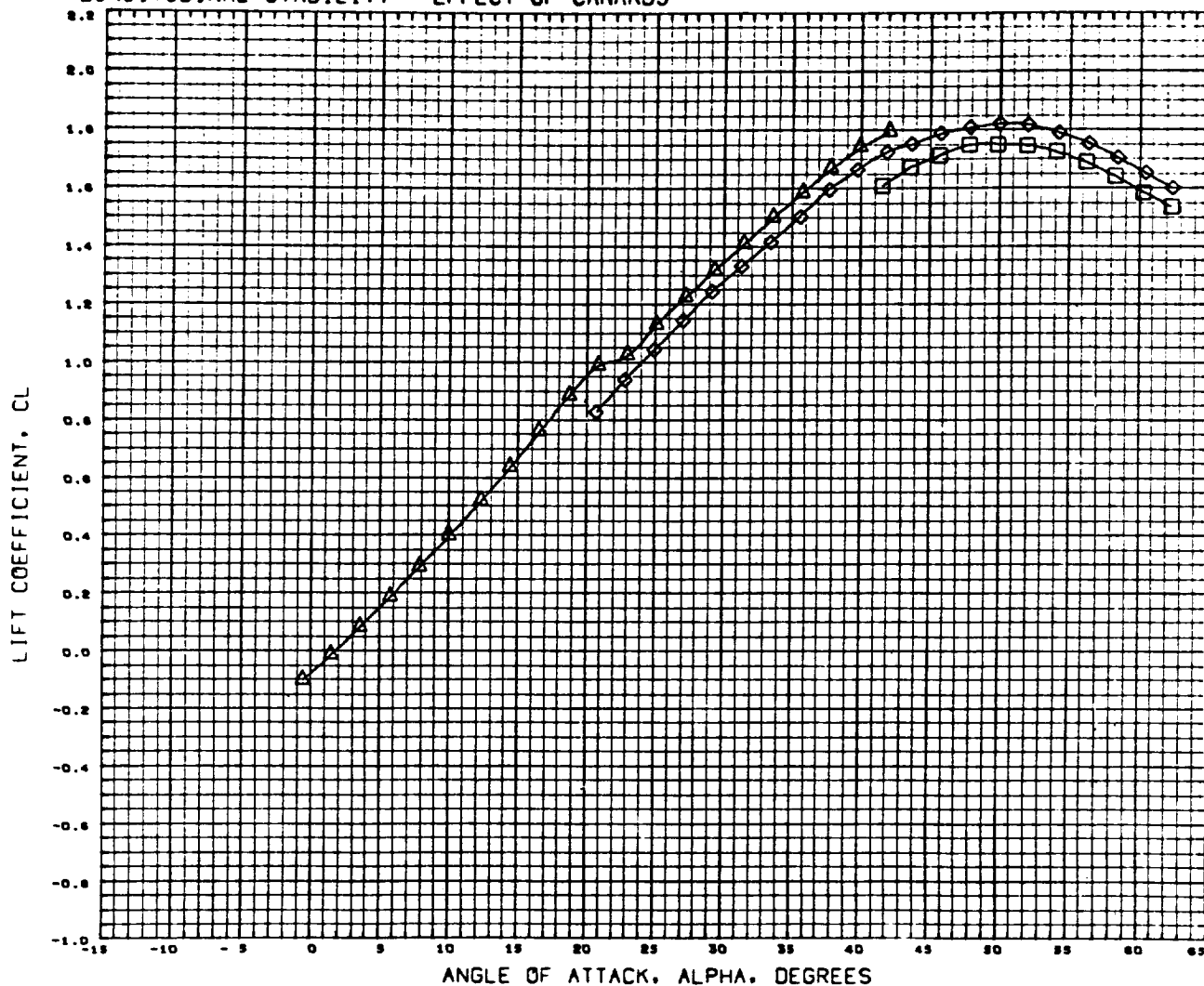
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820X)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS



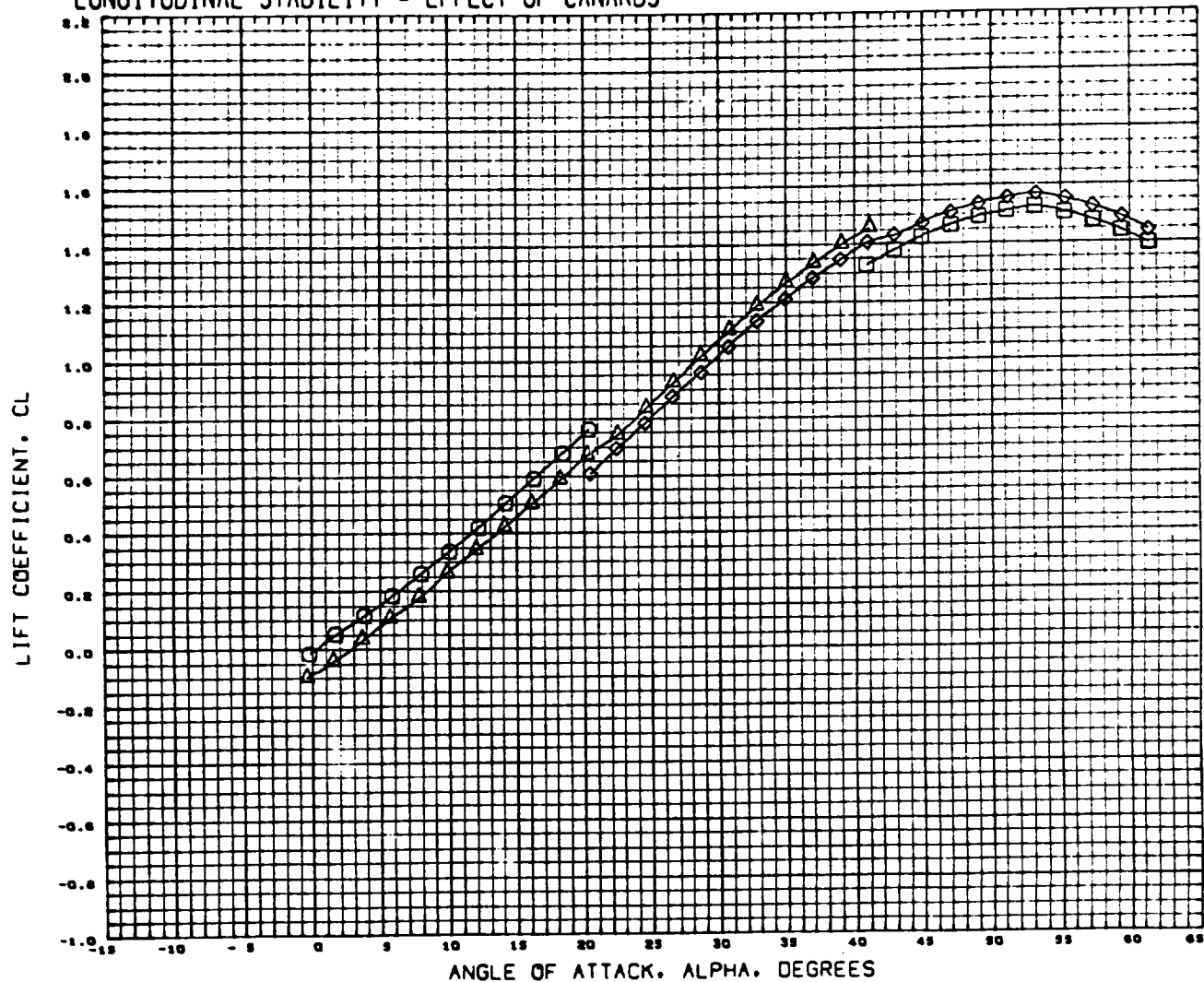
DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3617A) DATA NOT AVAILABLE FOR ALL CONDITIONS
(F3618X) M496-MSFC AR11981-3 MODEL W682C12V2
(F3619X) M496-MSFC AR11981-3 MODEL W682C12V2
(E3620K) M496-MSFC AR11981-3 MODEL W682C12V2

BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
0.000	0.000	0.000	0.000	SREF 4.6225 30. IN.
0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
0.000	0.000	0.000	-60.000	YNRP 2.4000 IN.
				YNRP 0.0000 IN.
				ZMRP 0.0000 IN.
				SCALE 0.0025

MACH 1.953

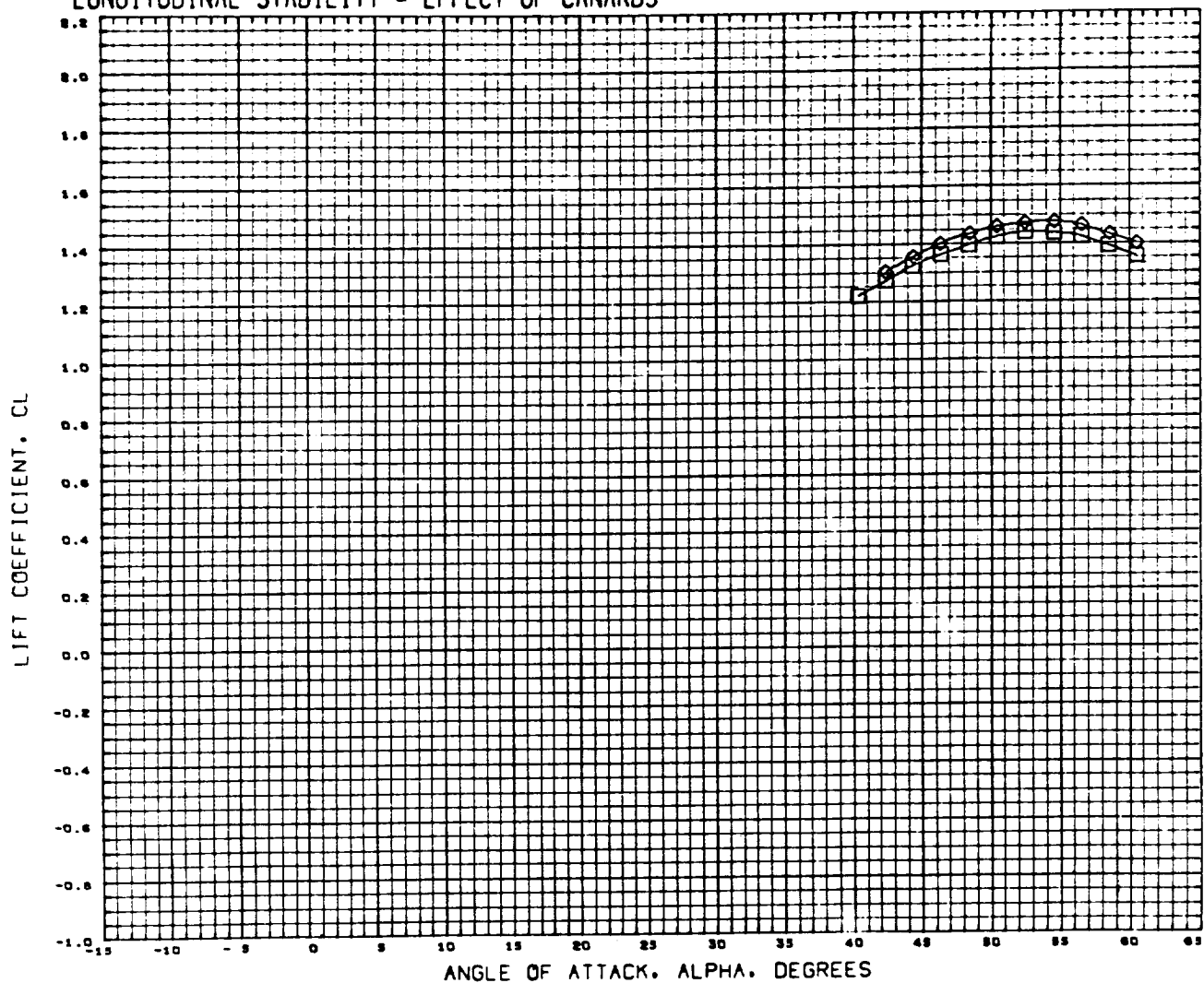
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	M496-M3FC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 33.1N.
(F3018X)	M496-M3FC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.9360 1N.
(F3019X)	M496-M3FC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 1N.
(E3020K)	M496-M3FC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	YMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 3.480

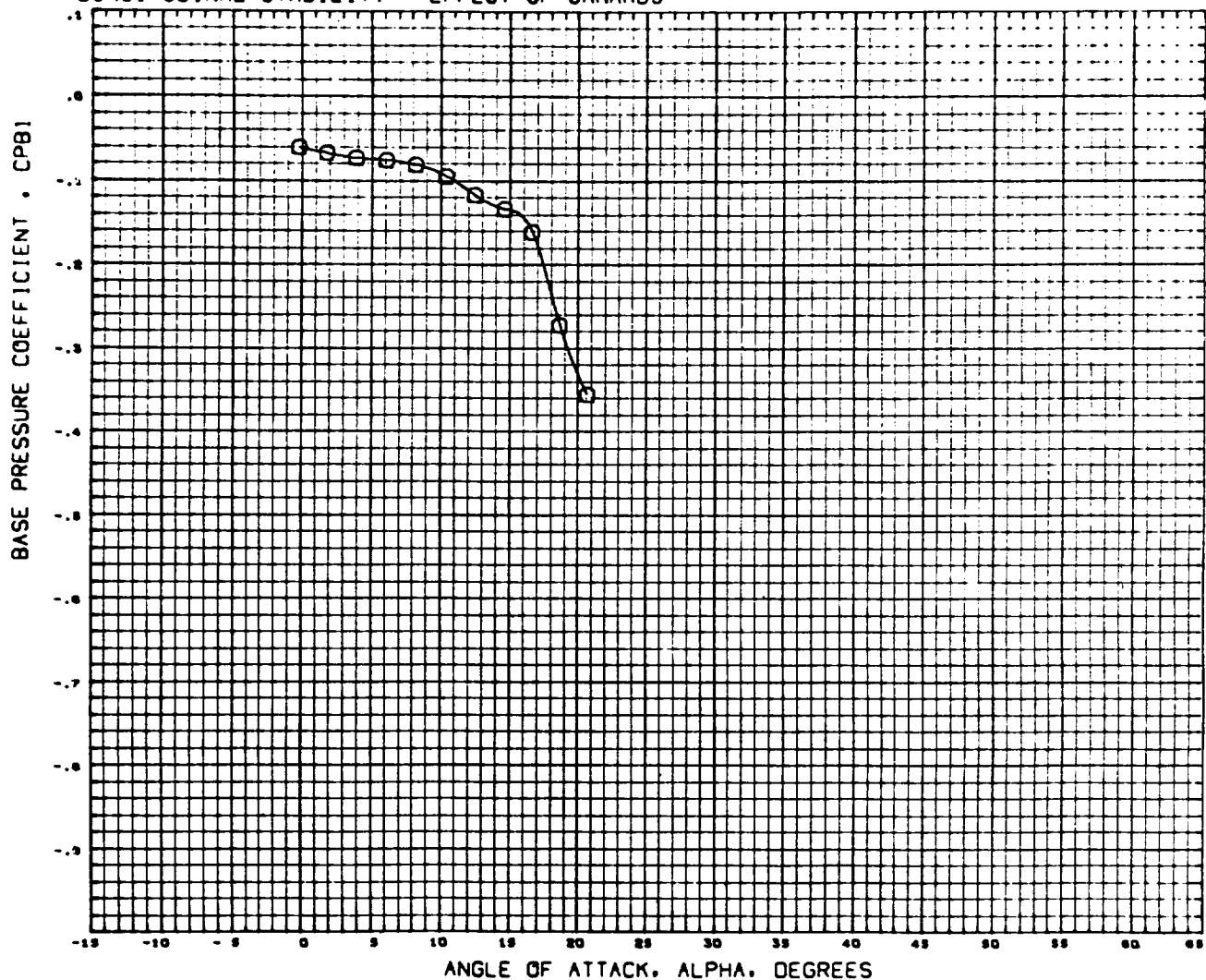
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.6225 SQ. IN.
(F3819X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF	1.3360 IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF	4.3000 IN.
(E3820K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.999

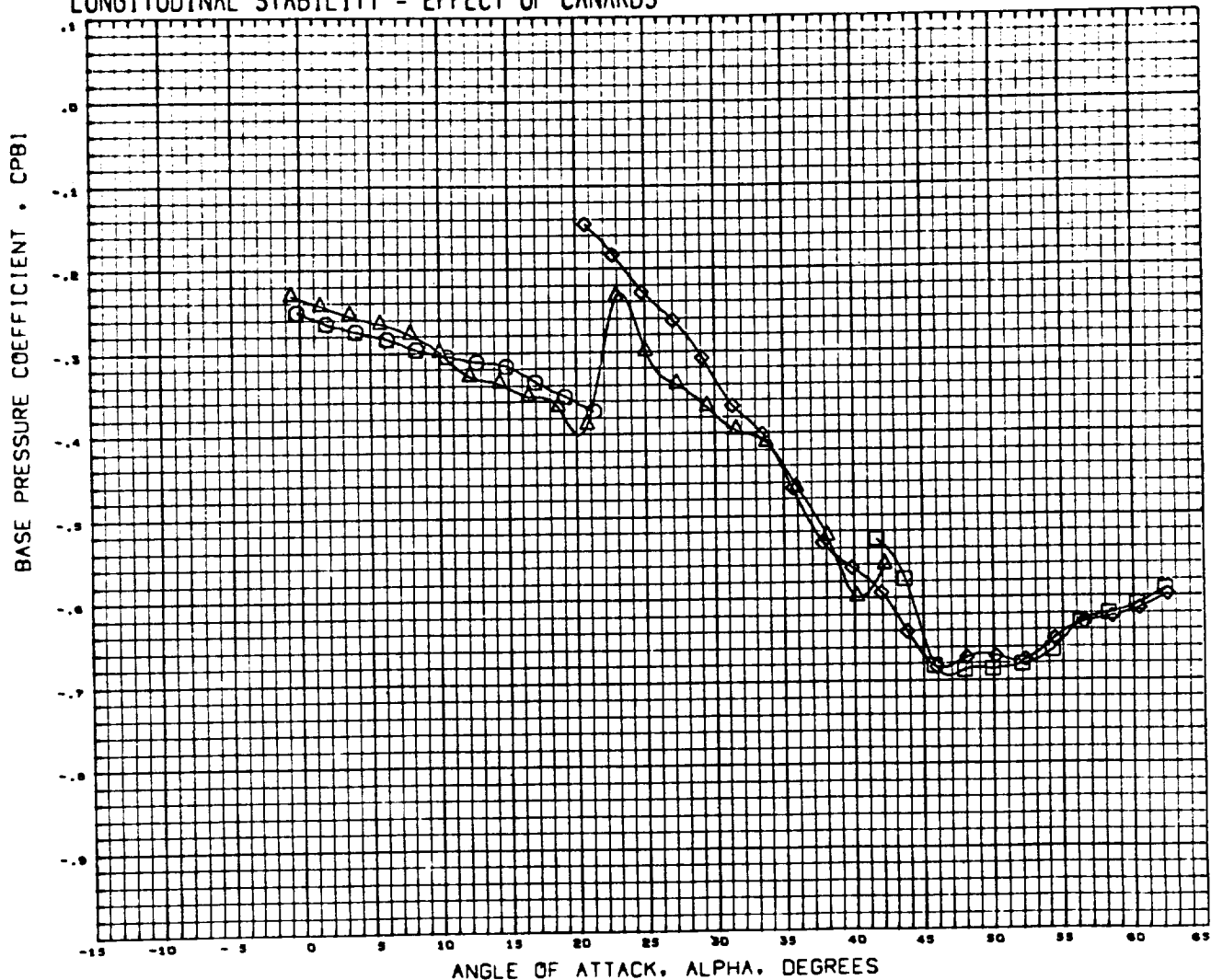
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 50. IN.
(F3818K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.998

LONGITUDINAL STABILITY - EFFECT OF CANARDS

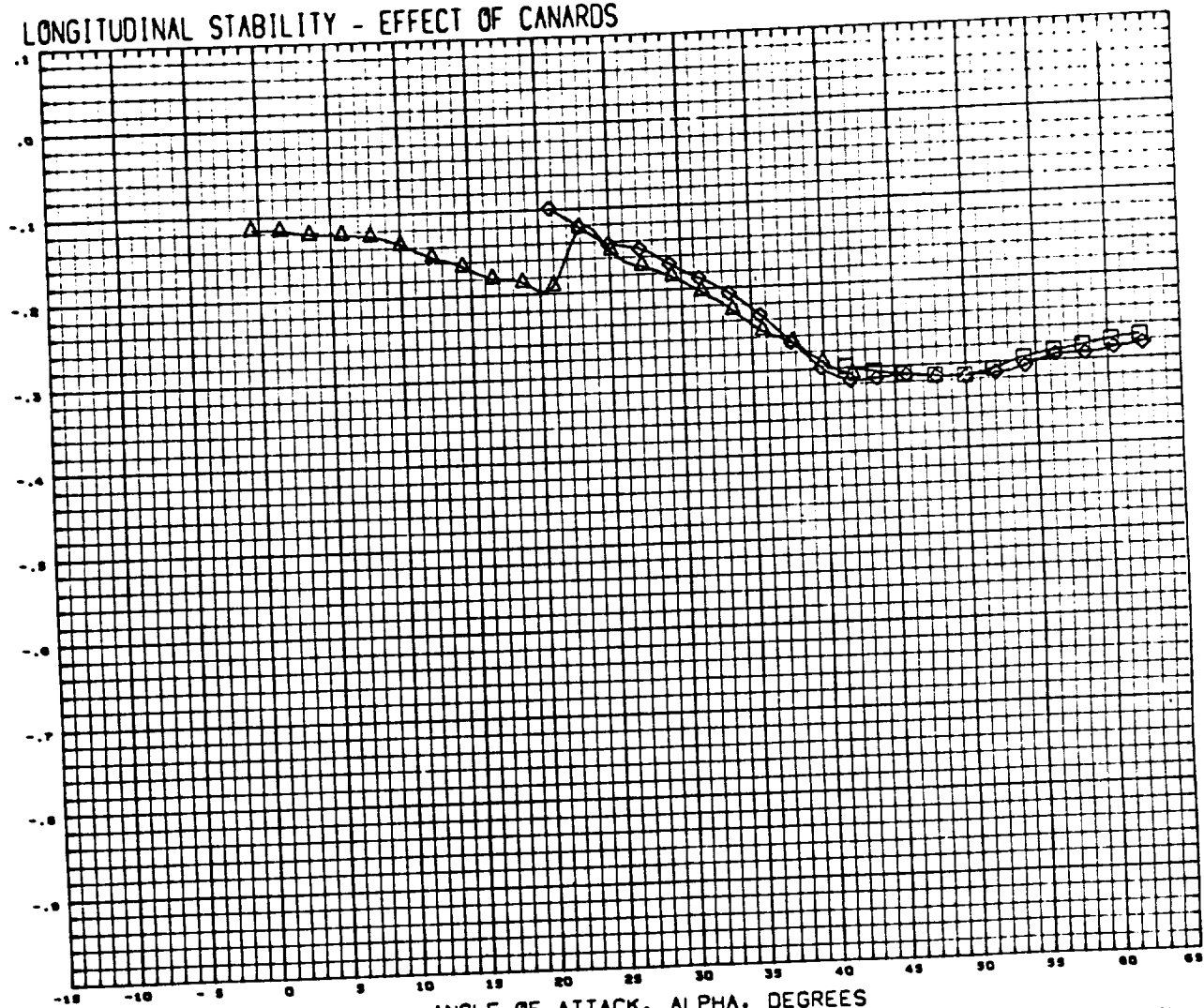


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS

BASE PRESSURE COEFFICIENT • CPB1

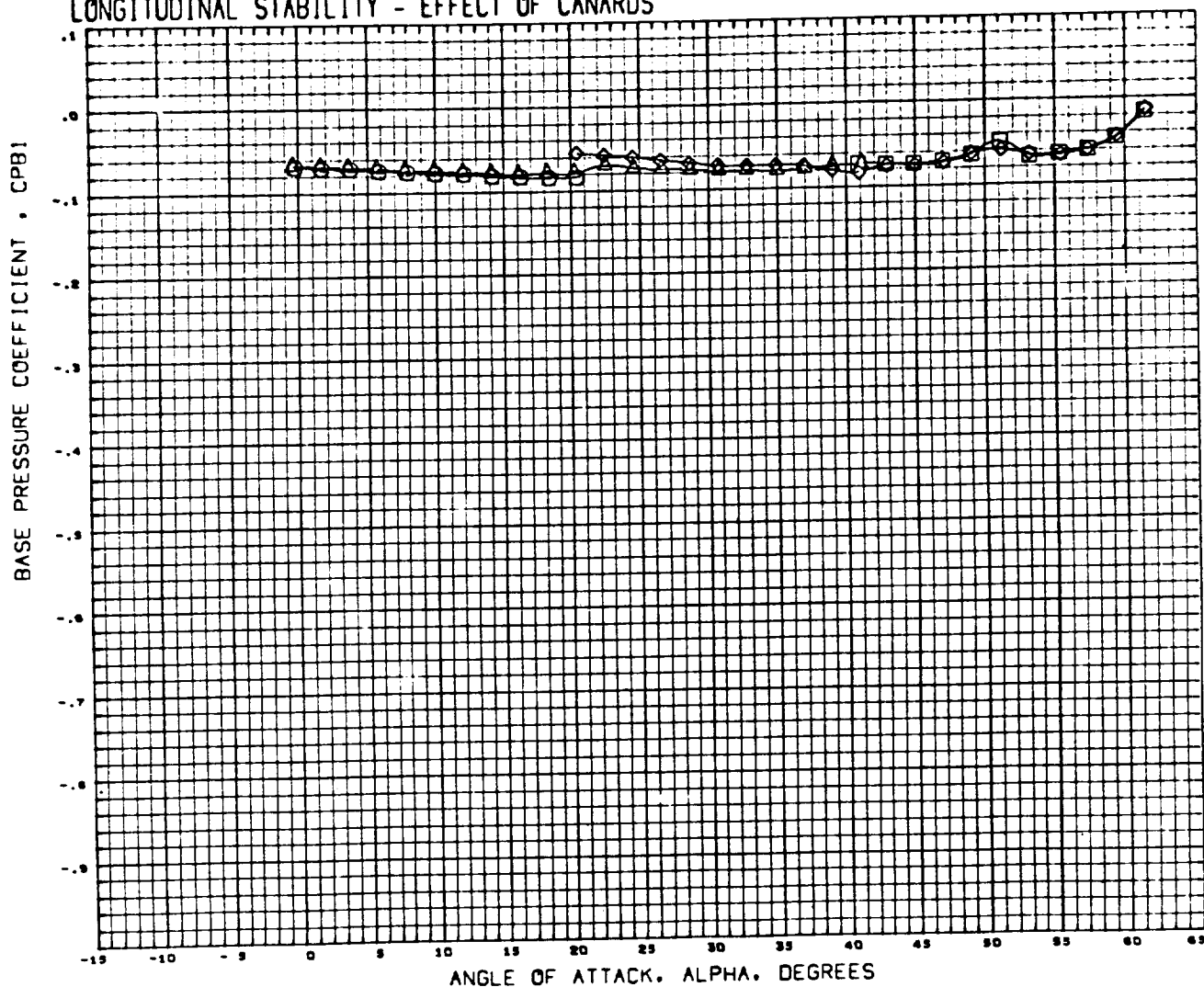


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3917A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3918X)	M496-H3FC AR11961-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3919X)	M496-H3FC AR11961-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3920K)	M496-H3FC AR11961-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.993

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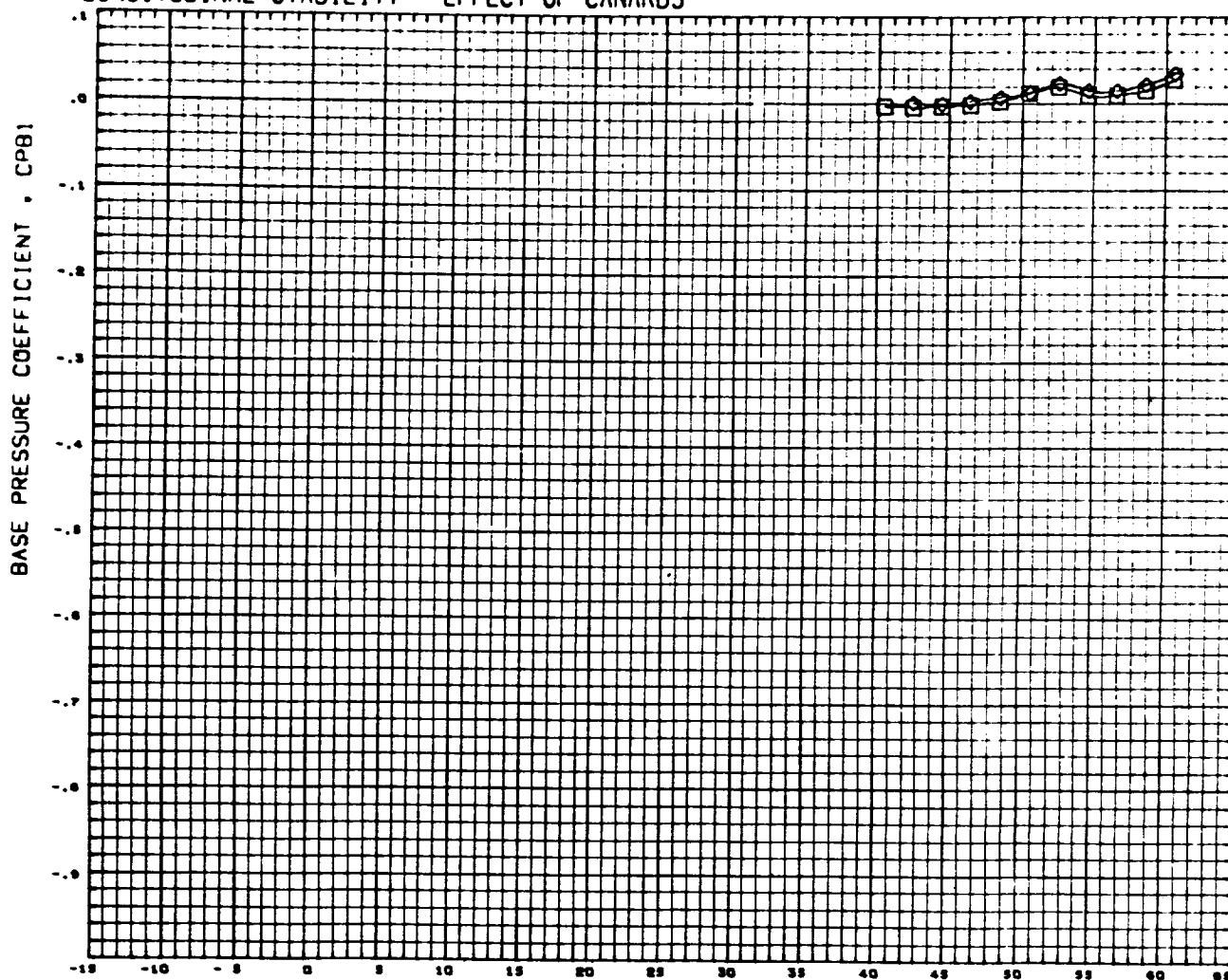
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820X)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	KMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.480

LONGITUDINAL STABILITY - EFFECT OF CANARDS

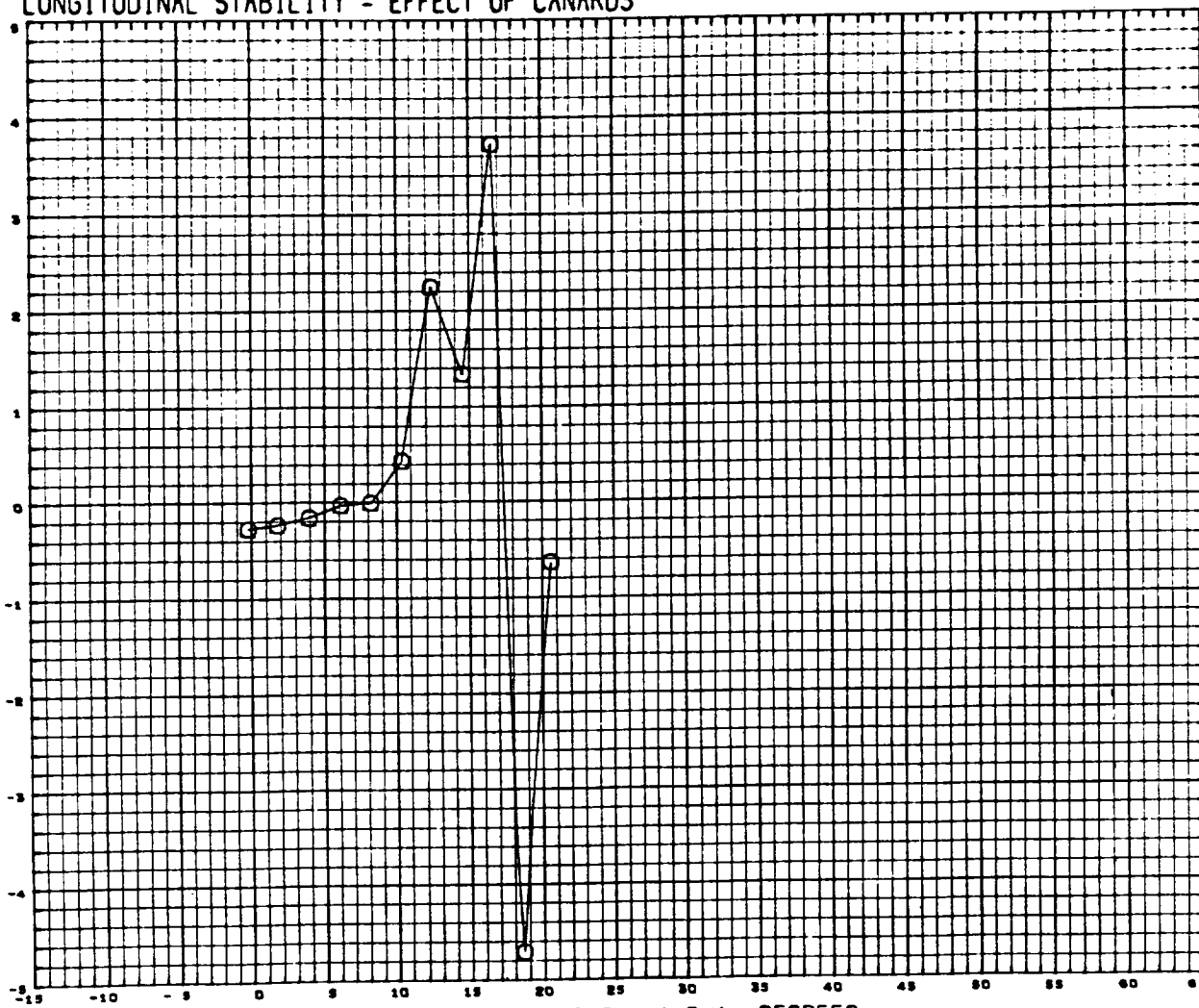


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3017A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.0225 IN.
(P3010X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF	1.5360 IN.
(P3019X)	H496-MSFC AR11961-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	SREF	4.3000 IN.
(E3020X)	H496-MSFC AR11961-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.959

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

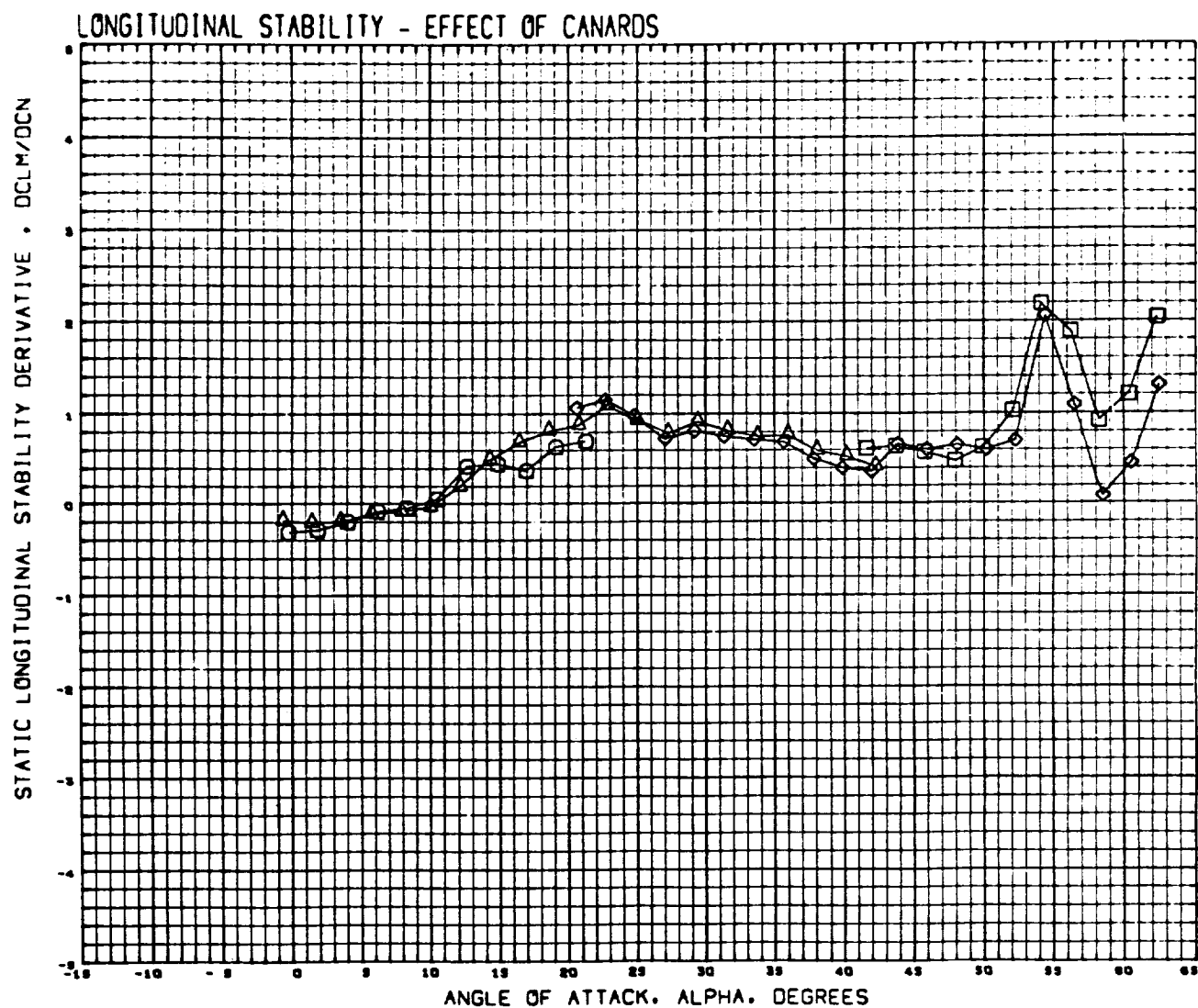


DATA SET SYMBOL CONFIGURATION DESCRIPTION
(E3817A) M496-M5FC AR11981-3 MODEL W6B2C12V2
(E3818X) DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3819X) DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3820K) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVTR ATLON CANARD
0.000 0.000 0.000 0.000
0.000 0.000 0.000 -20.000
0.000 0.000 0.000 -40.000
0.000 0.000 0.000 -60.000

REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
SREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

MACH 0.998

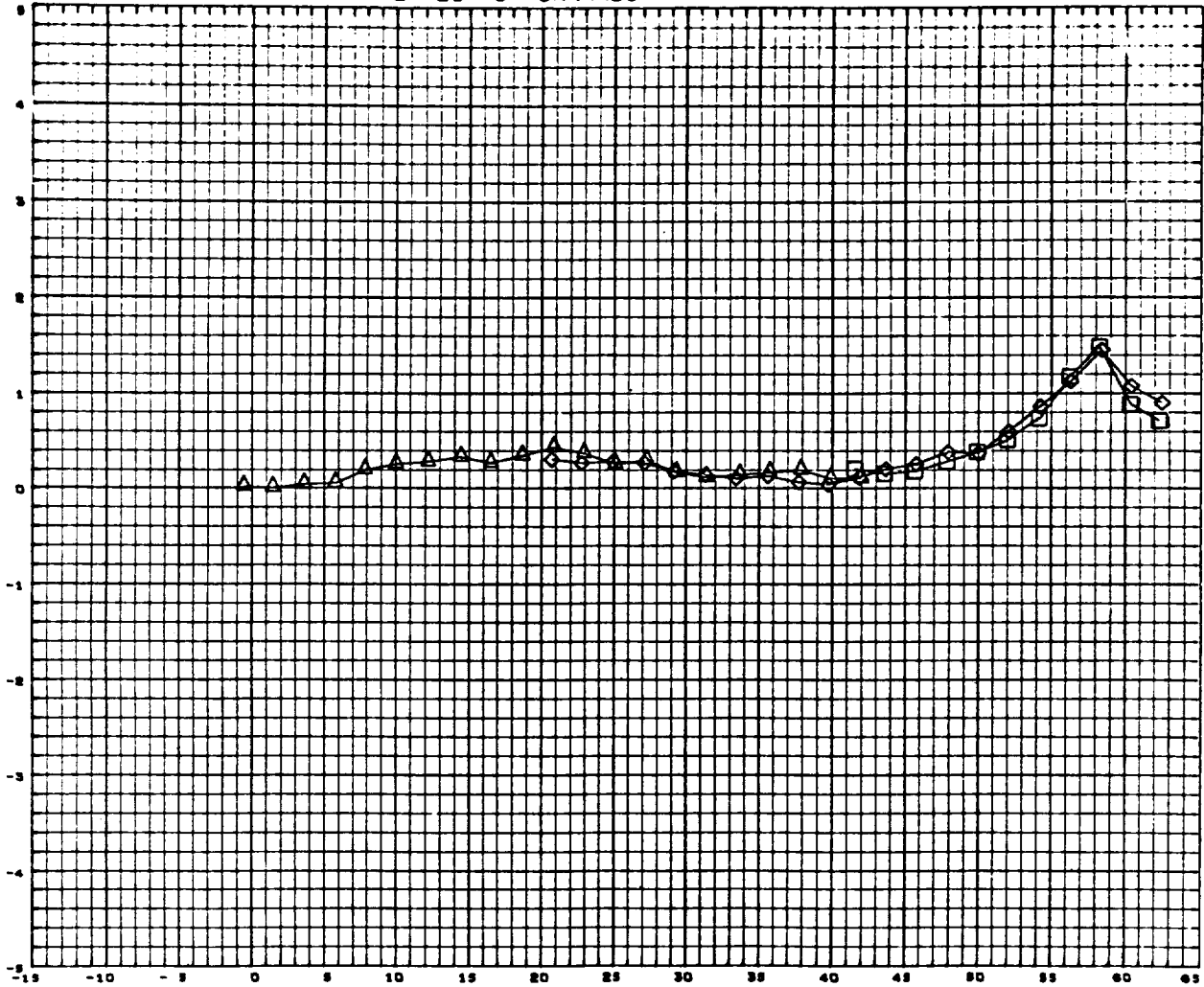


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3617A)	M496-M3FC AR11981-3 MGOEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 30.1N.
(F3618X)	M496-M3FC AR11981-3 MGOEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.3360 1N.
(F3619X)	M496-M3FC AR11981-3 MGOEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 1N.
(E3620K)	M496-M3FC AR11981-3 MGOEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

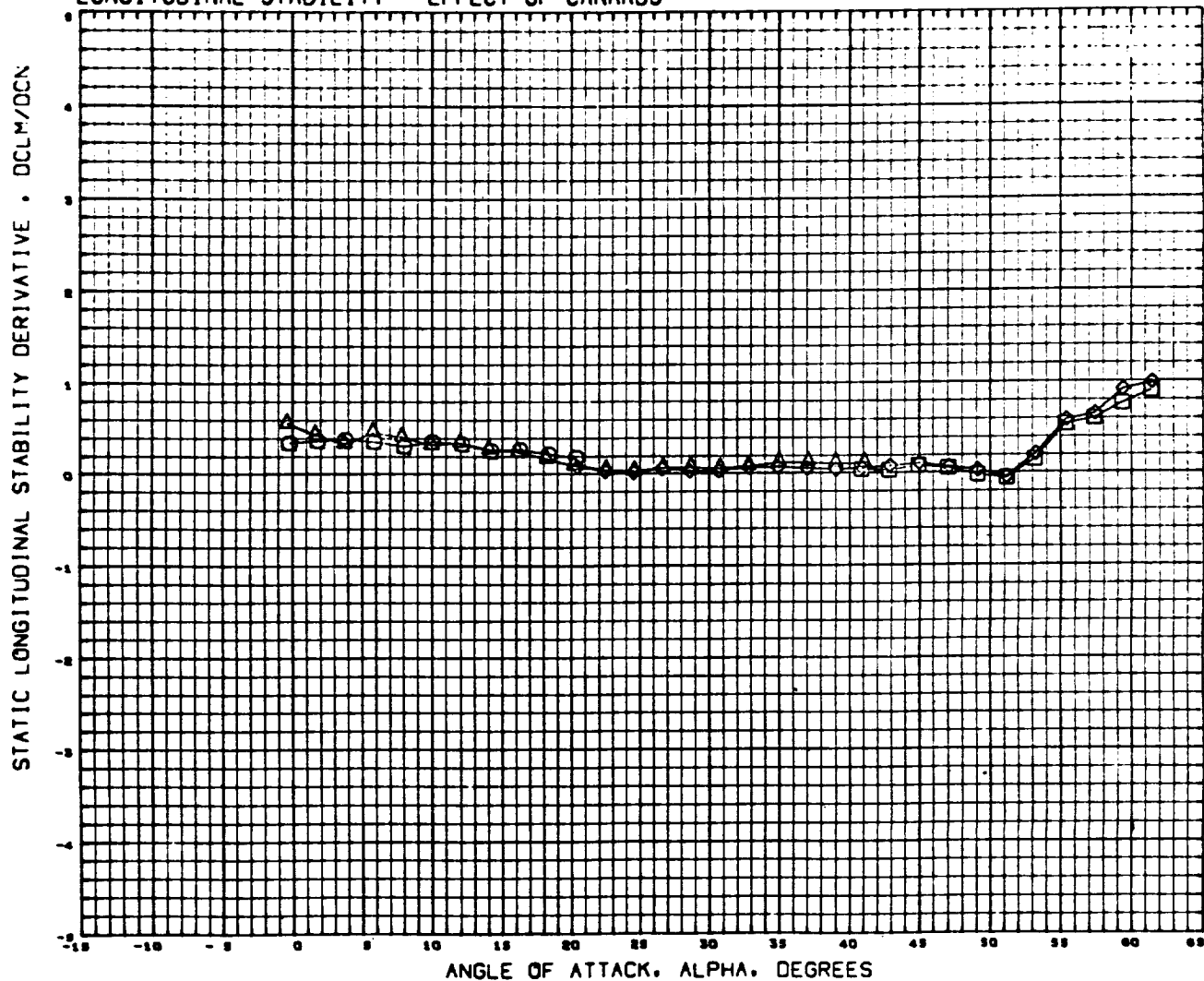


ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 50. IN.
(F3818X)	M496-M3FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-20.000	LREF 1.5340 IN.
(F3819X)	M496-M3FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3820K)	M496-M3FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.933

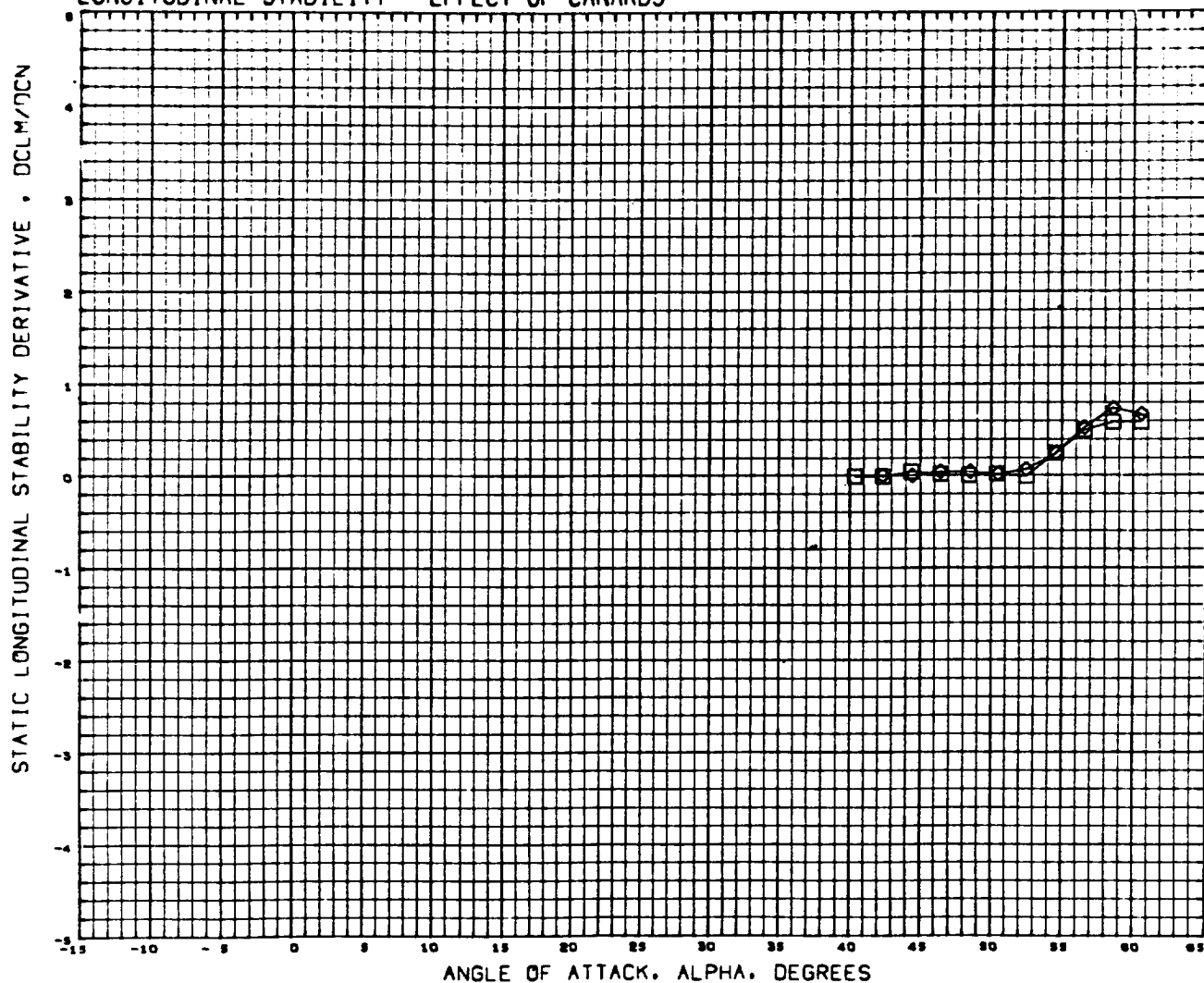
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3617A)	M496-HSFC AR11961-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SREF 4.6229 sq. in.
(F3618X)	M496-HSFC AR11961-3 MODEL W882C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 in.
(F3619K)	M496-HSFC AR11961-3 MODEL W882C12V2	0.000	0.000	0.000	-40.000	CREF 4.3000 in.
(E3620K)	M496-HSFC AR11961-3 MODEL W882C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0029

MACH 3.480

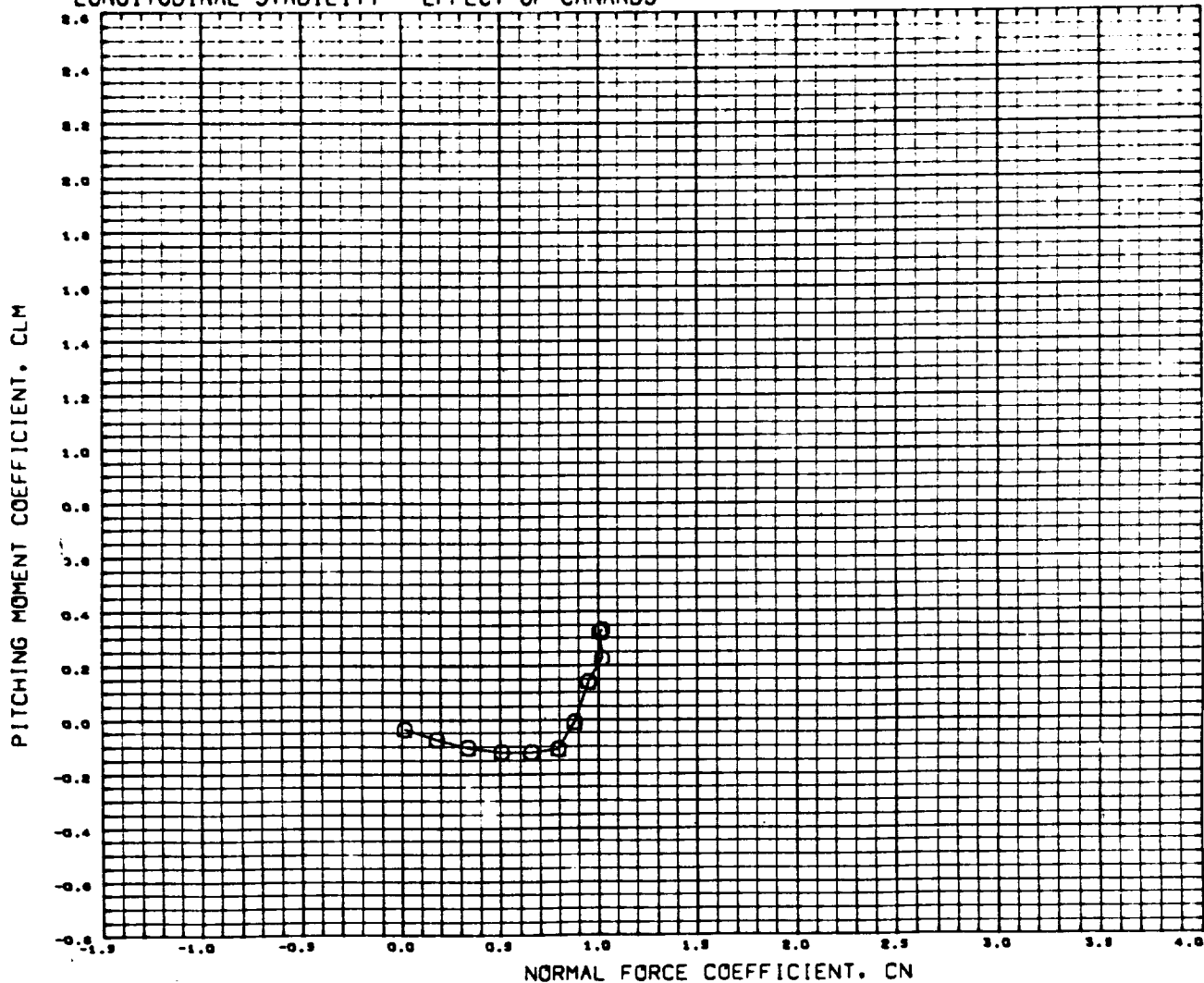
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3617A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3618X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3619X)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3620K)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 4.959

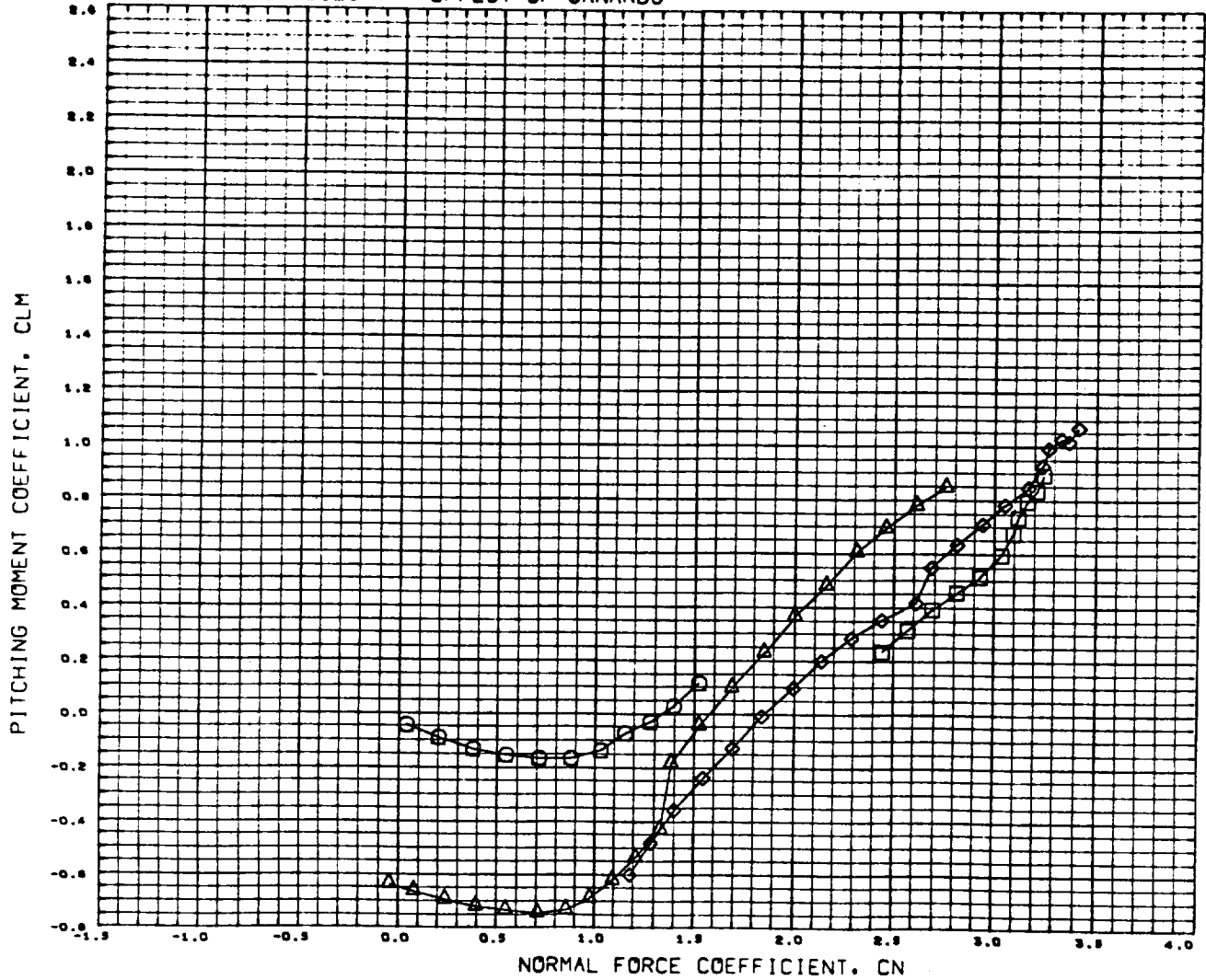
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-M3FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SREF 4.8225 53. IN.
(P3816X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(P3819X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-40.000	SREF 4.3000 IN.
(E3820K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.590

LONGITUDINAL STABILITY - EFFECT OF CANARDS

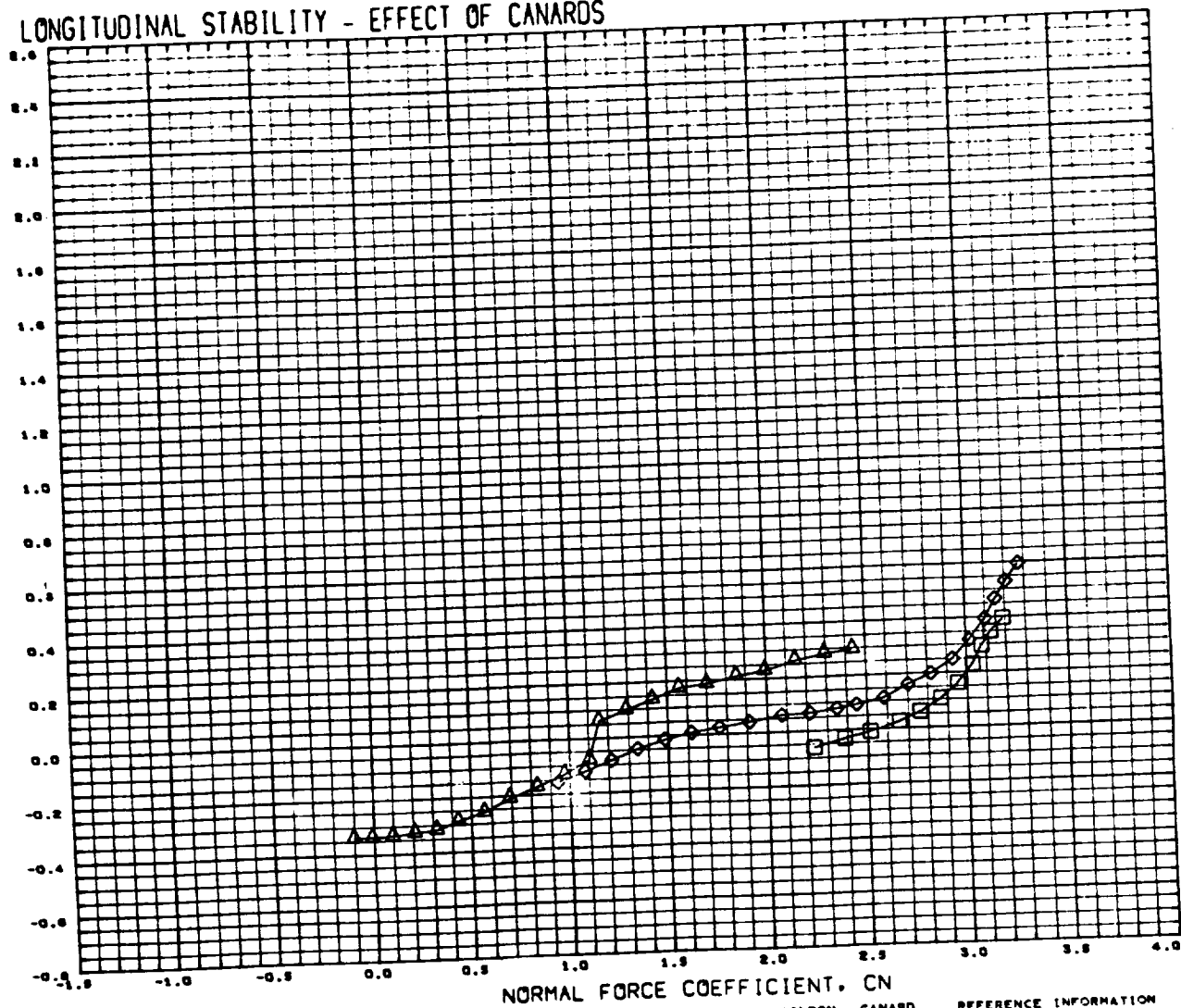


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MODEL W82C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 80. IN.
(F3818X)	M496-HSFC AR11981-3 MODEL W82C12V2	0.000	0.000	0.000	-20.000	LREF 1.3360 IN.
(F3819X)	M496-HSFC AR11981-3 MODEL W82C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820X)	M496-HSFC AR11981-3 MODEL W82C12V2	0.000	0.000	0.000	-60.000	KMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS

PITCHING MOMENT COEFFICIENT, CLM

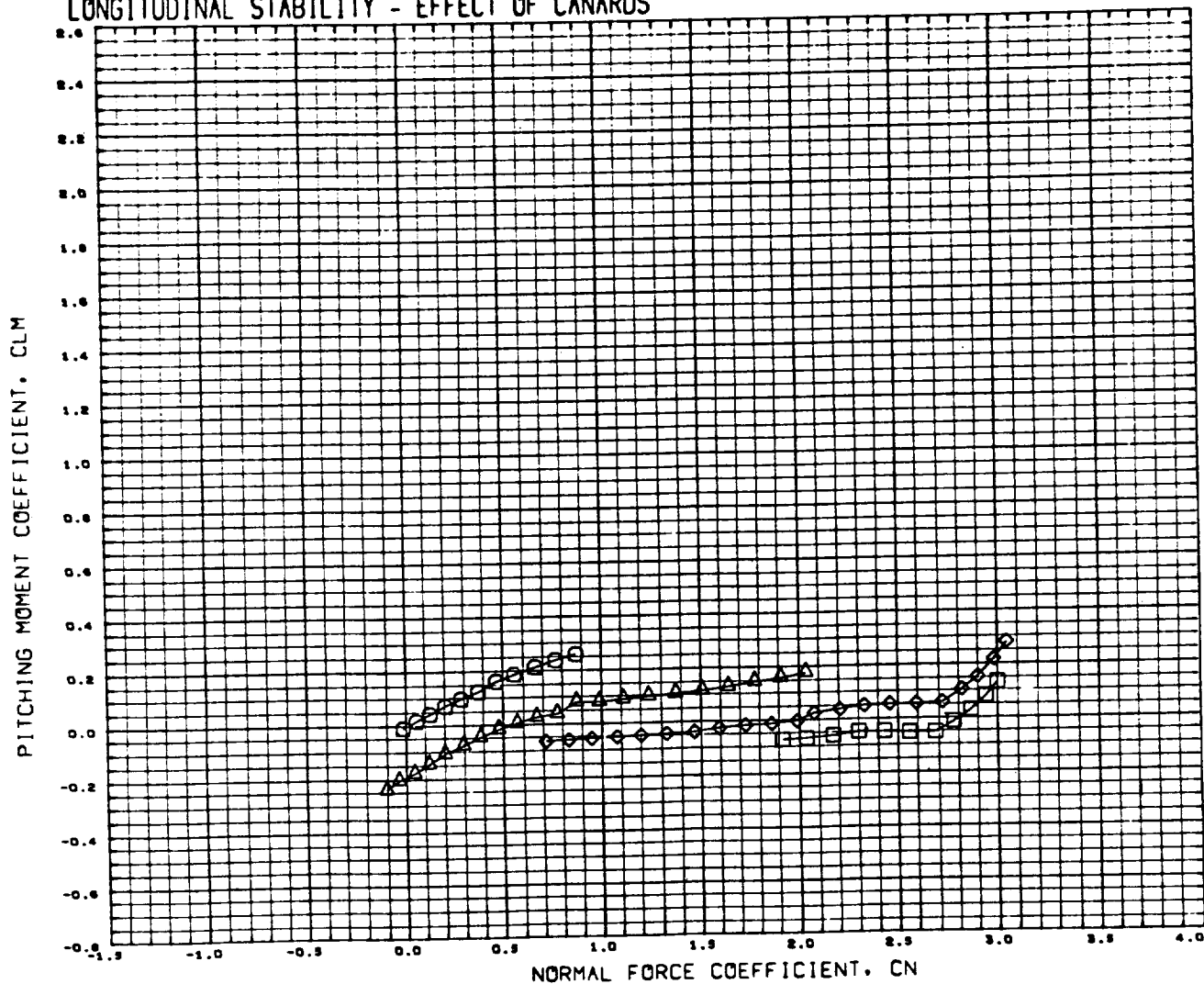


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3818X)	N496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	N496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	N496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.953

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

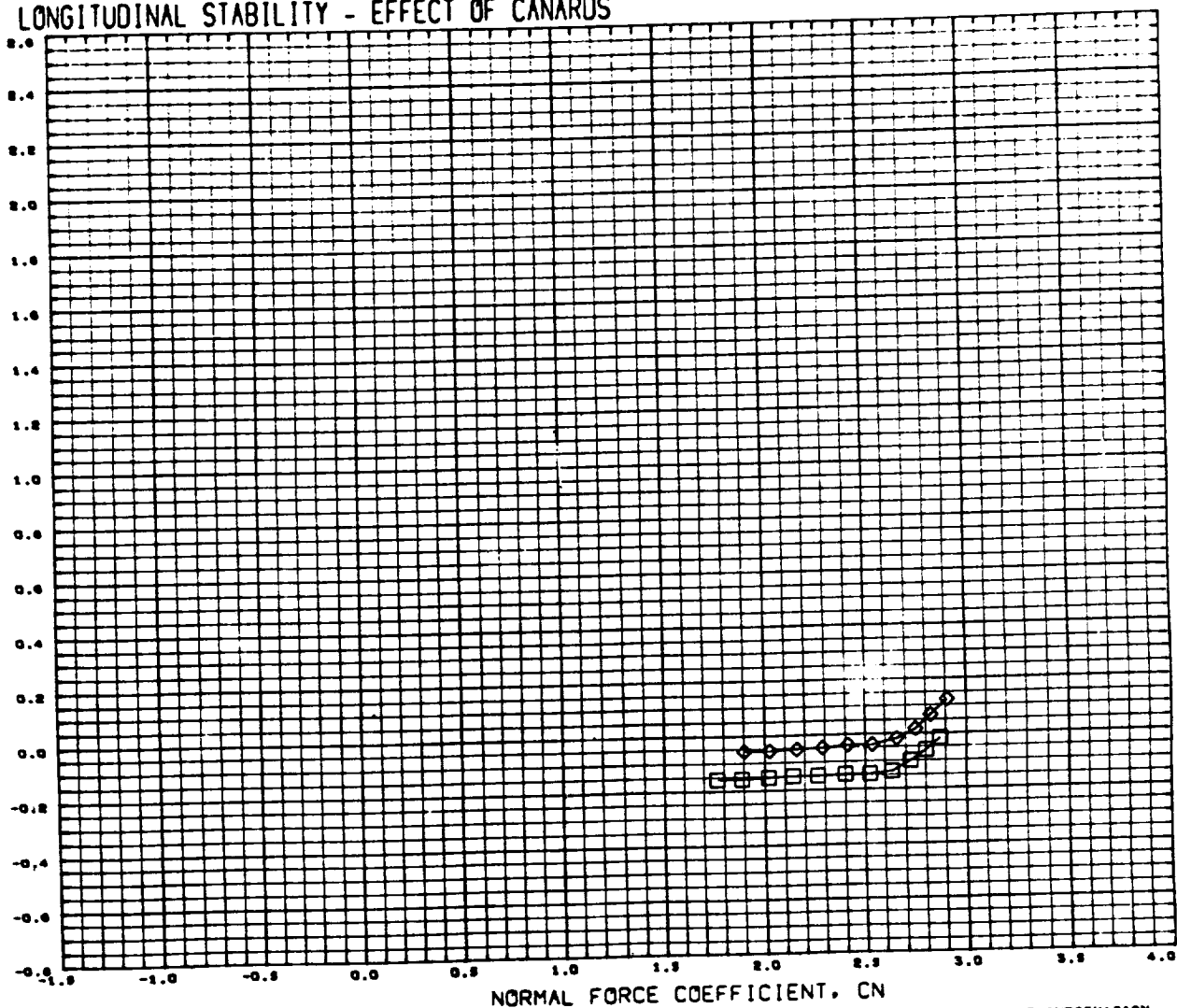


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-MSFC AR11981-3 MODEL W82ZC12V2	0.000	0.000	0.000	0.000	SREF 4.6225 30. IN.
(F3818X)	M496-MSFC AR11981-3 MODEL W82ZC12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3819X)	M496-MSFC AR11981-3 MODEL W82ZC12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-MSFC AR11981-3 MODEL W82ZC12V2	0.000	0.000	0.000	-60.000	ZMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.490

LONGITUDINAL STABILITY - EFFECT OF CANARDS

PITCHING MOMENT COEFFICIENT, CLM



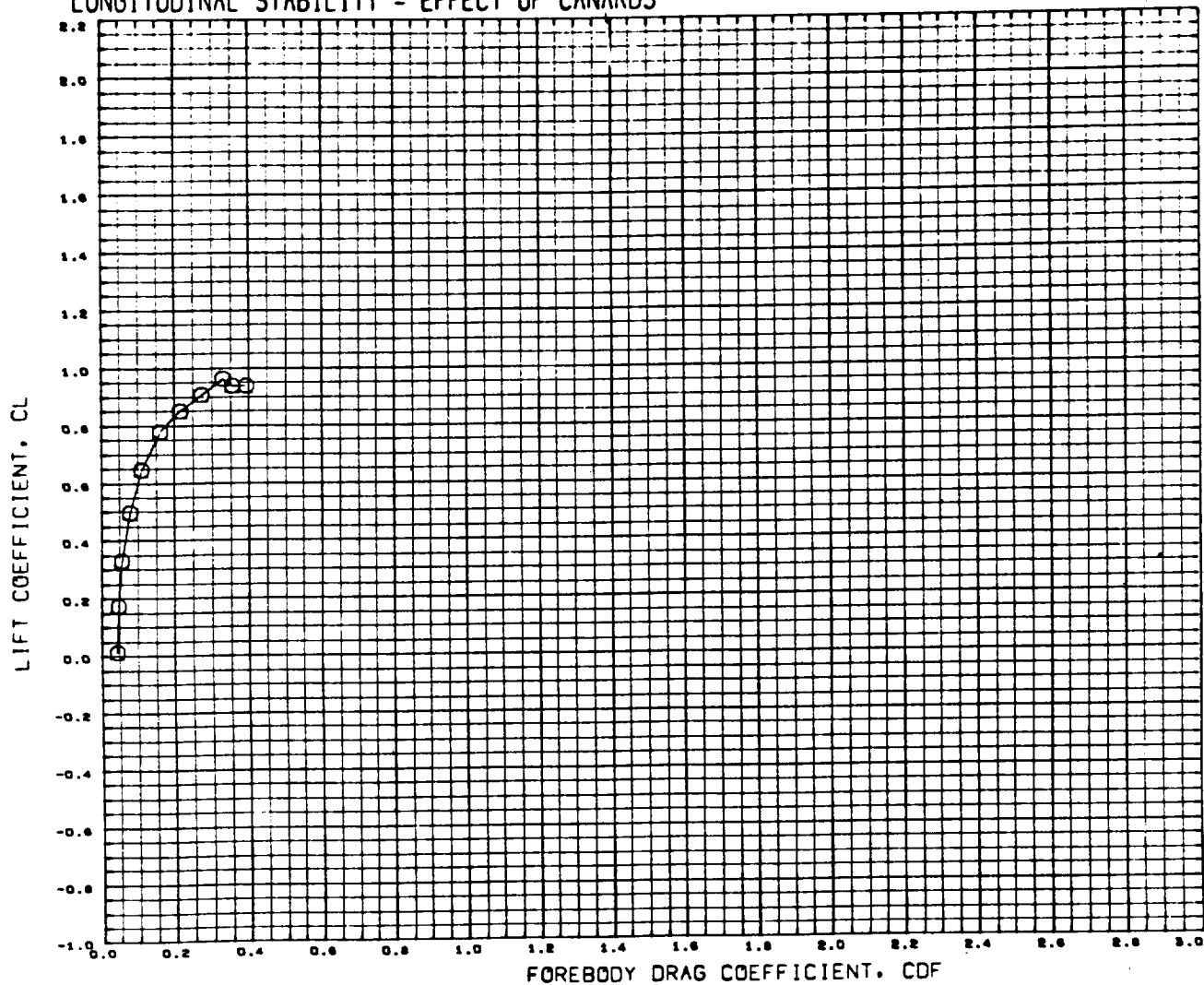
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3817A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3816X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3819X) M496-MSFC ARI1981-3 MODEL W682C12V2
 (E3820K) M496-MSFC ARI1981-3 MODEL W682C12V2

BETA ELEVTR AILRON CANARD
 0.000 0.000 0.000 0.000
 0.000 0.000 0.000 -20.000
 0.000 0.000 0.000 -40.000
 0.000 0.000 0.000 -60.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 4.999

LONGITUDINAL STABILITY - EFFECT OF CANARDS



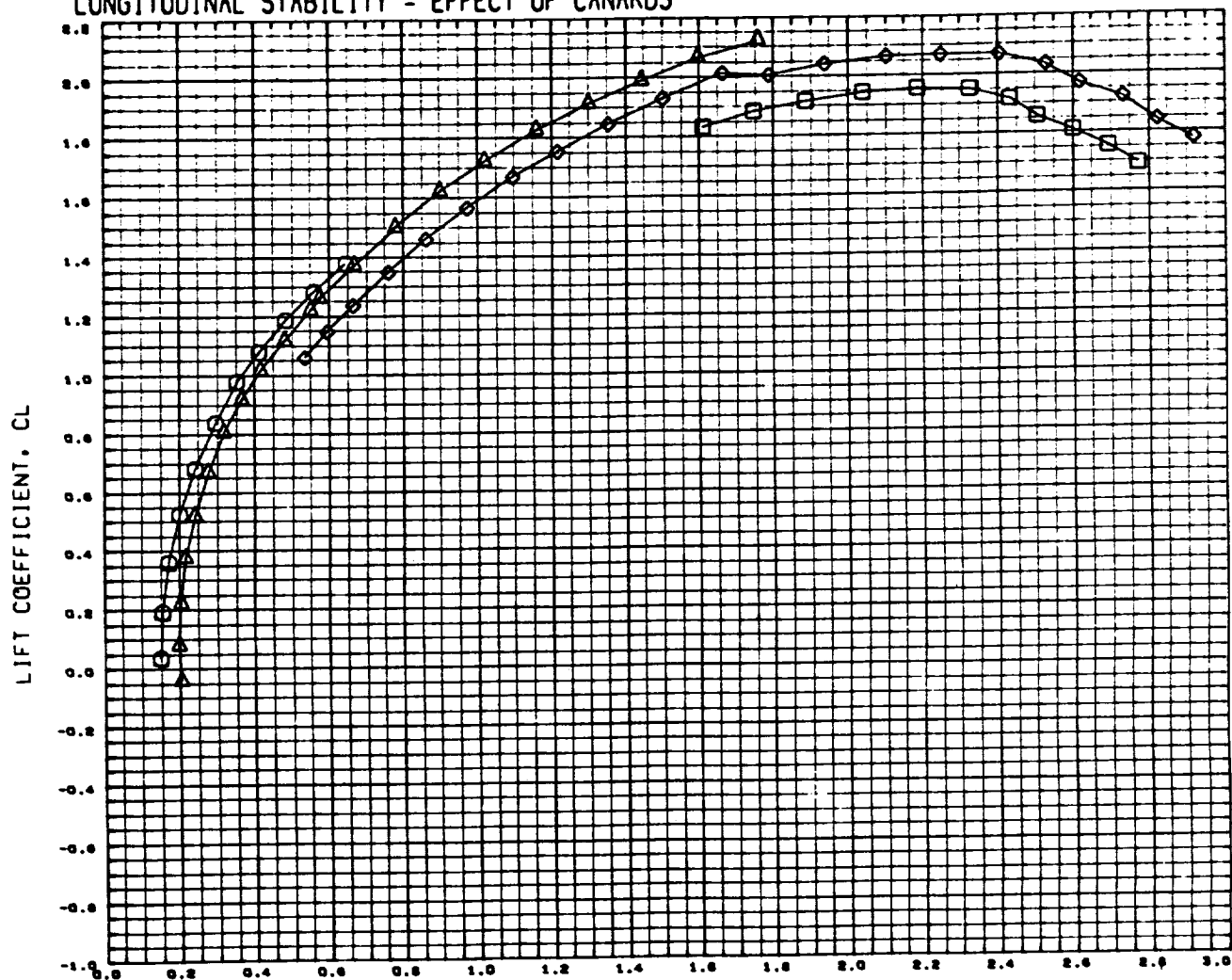
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3817A) ○ M496-HSFC AR11981-3 MODEL W682C12V2
 (F3818X) △ DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3819X) ◇ DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3420X) □ DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVTR AILRON CANARD
 0.000 0.000 0.000 0.000
 0.000 0.000 0.000 -20.000
 0.000 0.000 0.000 -40.000
 0.000 0.000 0.000 -60.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.3360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 0.999

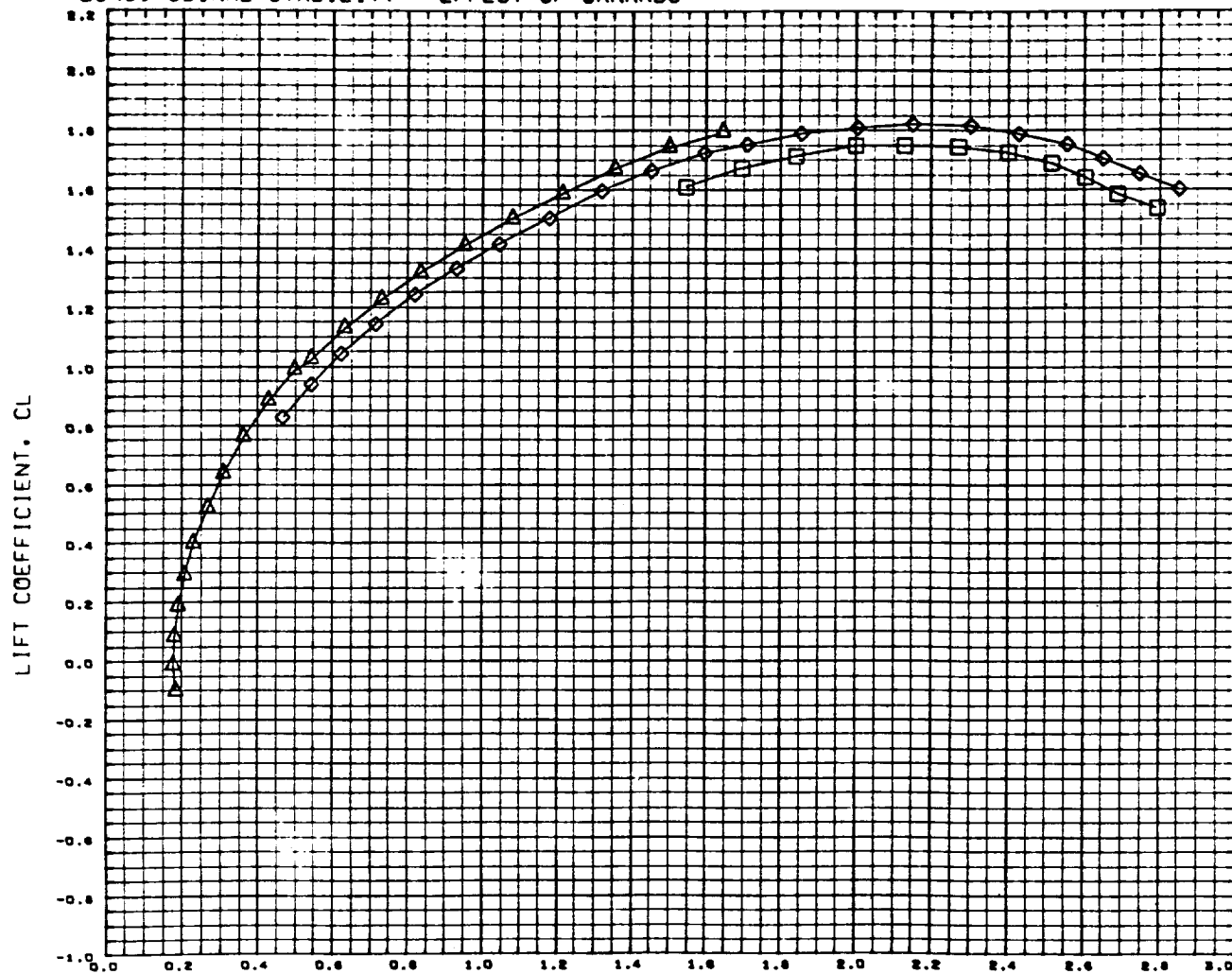
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3817A)	M496-HSFC AR11981-3 MOEL W682C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(P3818X)	M496-HSFC AR11981-3 MOEL W682C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(P3819X)	M496-HSFC AR11981-3 MOEL W682C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3820K)	M496-HSFC AR11981-3 MOEL W682C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

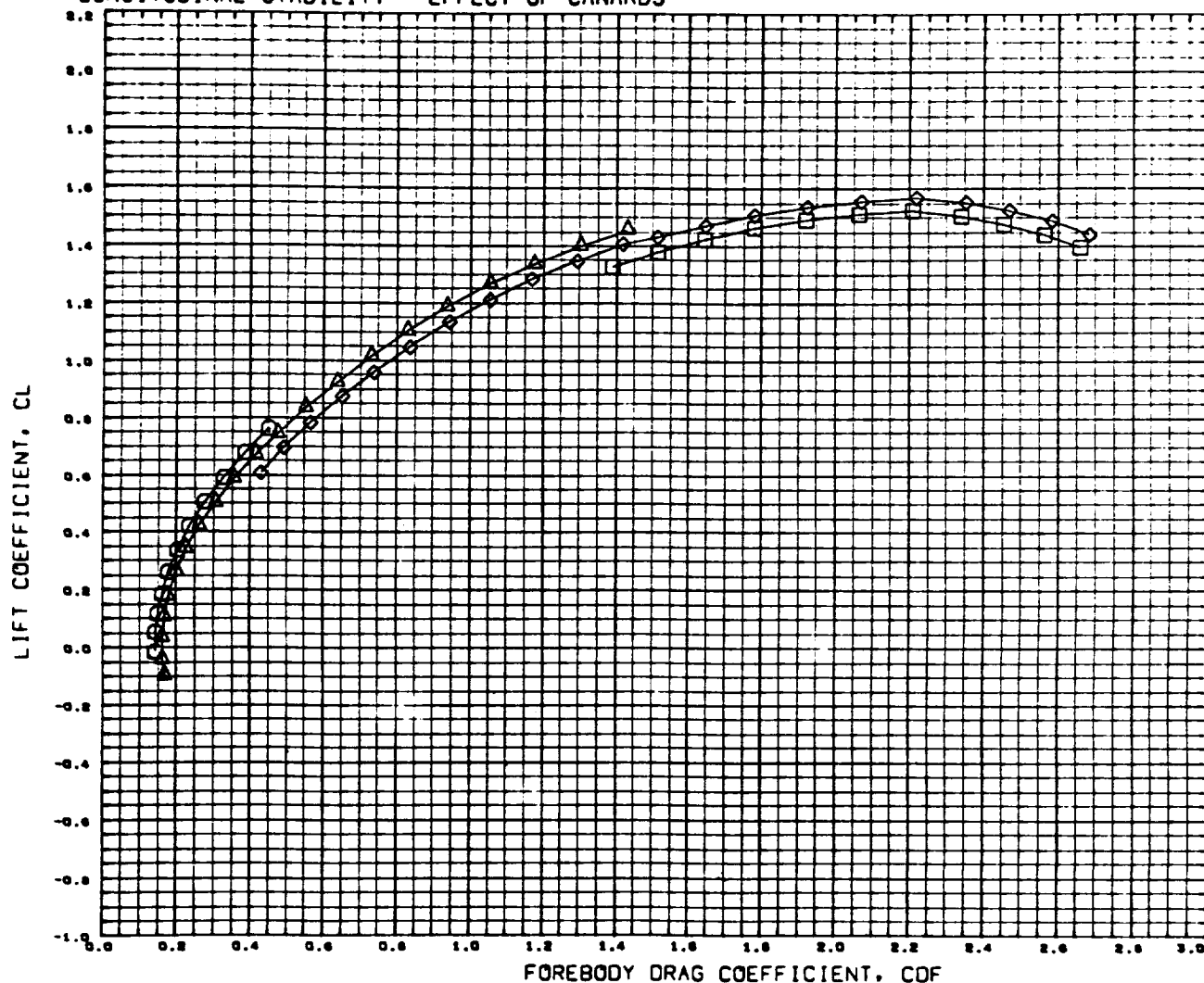
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3817A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREP 4.6225 30. IN.
(F3818X)	M496-MSFC AR11981-3 MCOEL W8B2C12V2	0.000	0.000	0.000	-20.000	LREP 1.3360 IN.
(F3819X)	M496-MSFC AR11981-3 MCOEL W8B2C12V2	0.000	0.000	0.000	-40.000	BREP 4.3000 IN.
(E3920K)	M496-MSFC AR11981-3 MCOEL W8B2C12V2	0.000	0.000	0.000	-60.000	YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.953

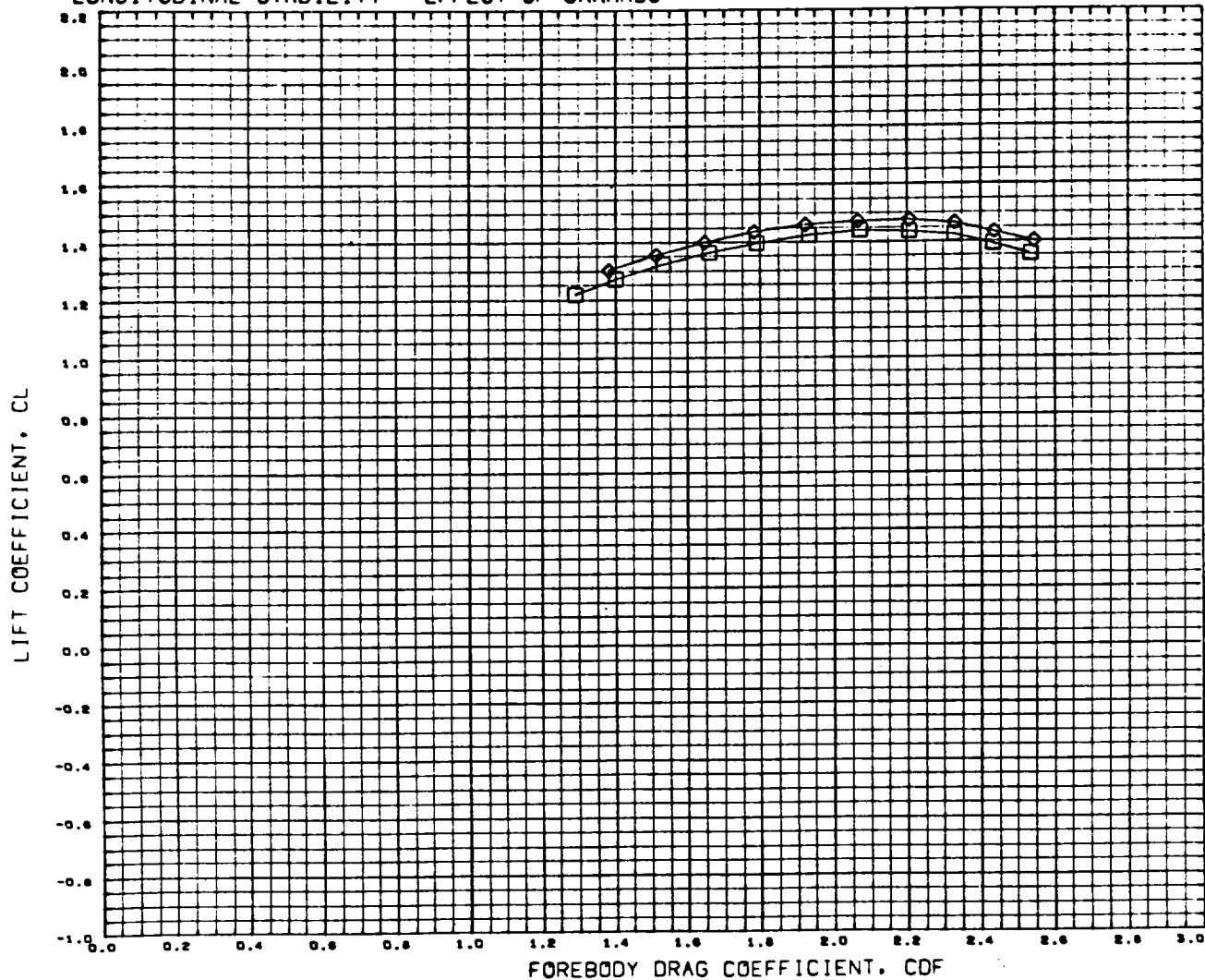
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3017A)	M496-M3FC AR11901-3 MCOEL W82C12V2	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3010X)	M496-M3FC AR11901-3 MCOEL W82C12V2	0.000	0.000	0.000	-20.000	LREF 1.5360 IN.
(F3019X)	M496-M3FC AR11901-3 MCOEL W82C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3020X)	M496-M3FC AR11901-3 MCOEL W82C12V2	0.000	0.000	0.000	-60.000	XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.400

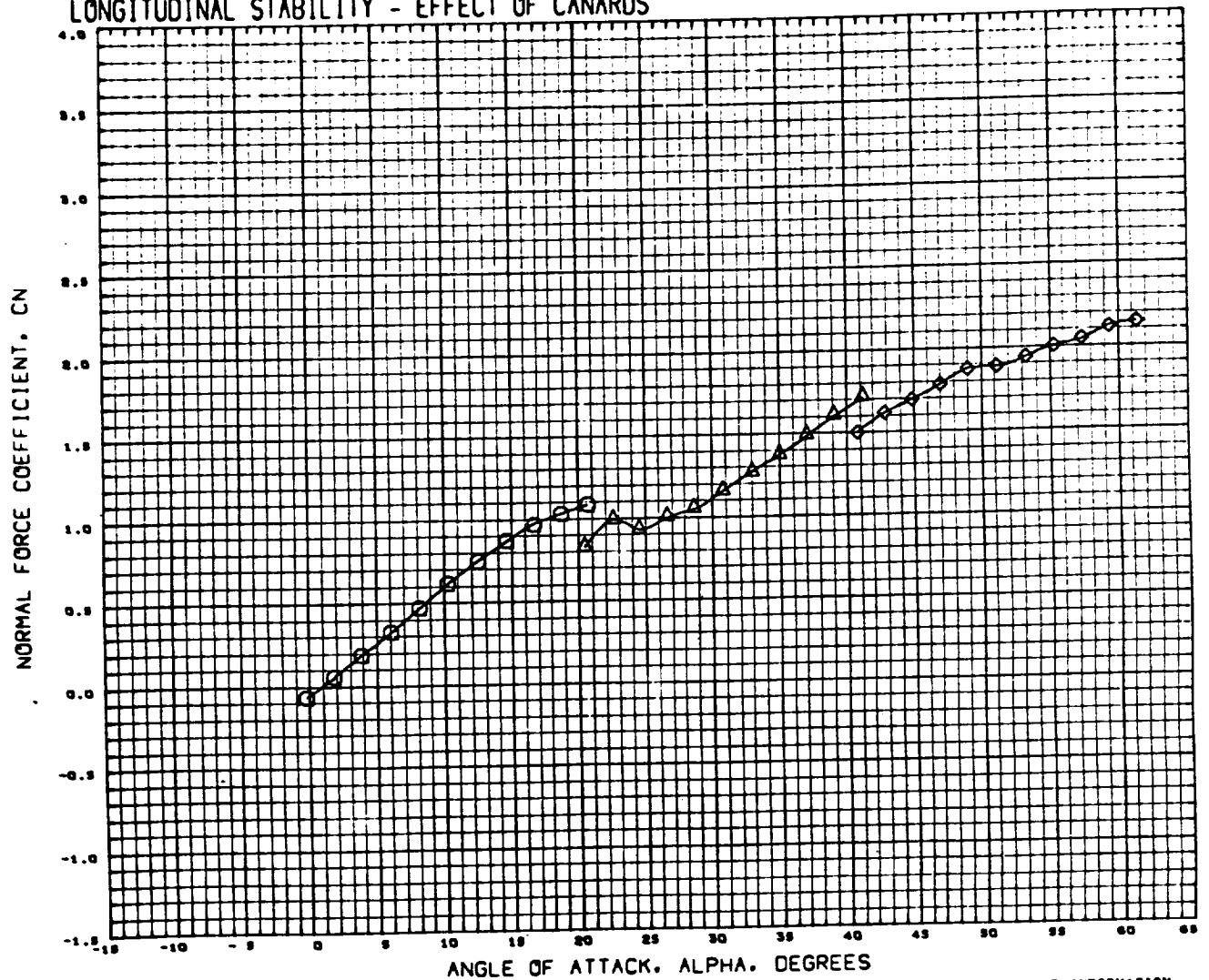
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3917A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.6225 SQ. IN.
(F3918X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	-20.000	LREF 1.5560 IN.
(F3919X)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-40.000	BREF 4.3000 IN.
(E3920K)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	-60.000	XHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

MACH 4.959

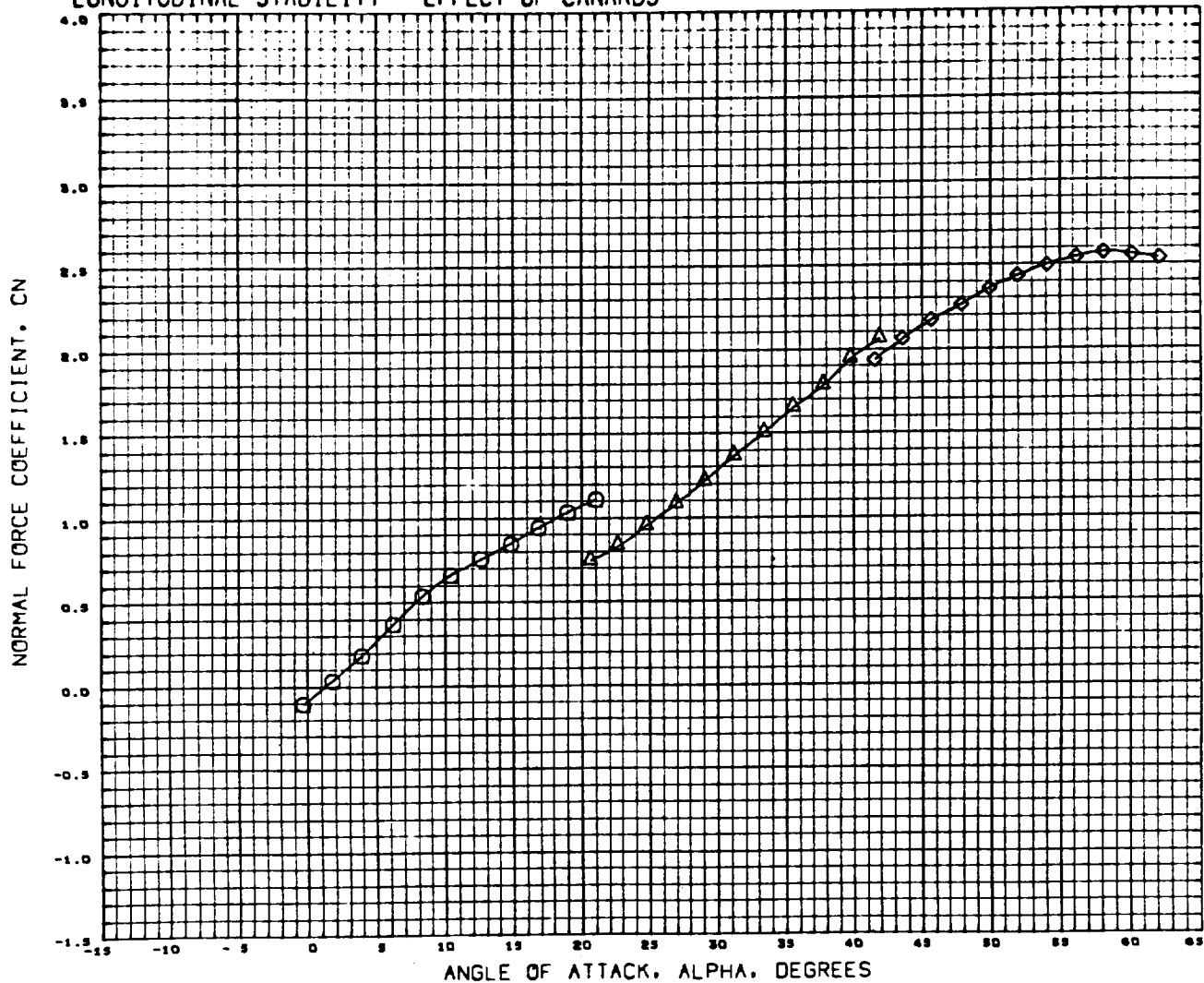
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-HSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031M)	M496-HSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3032K)	M496-HSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

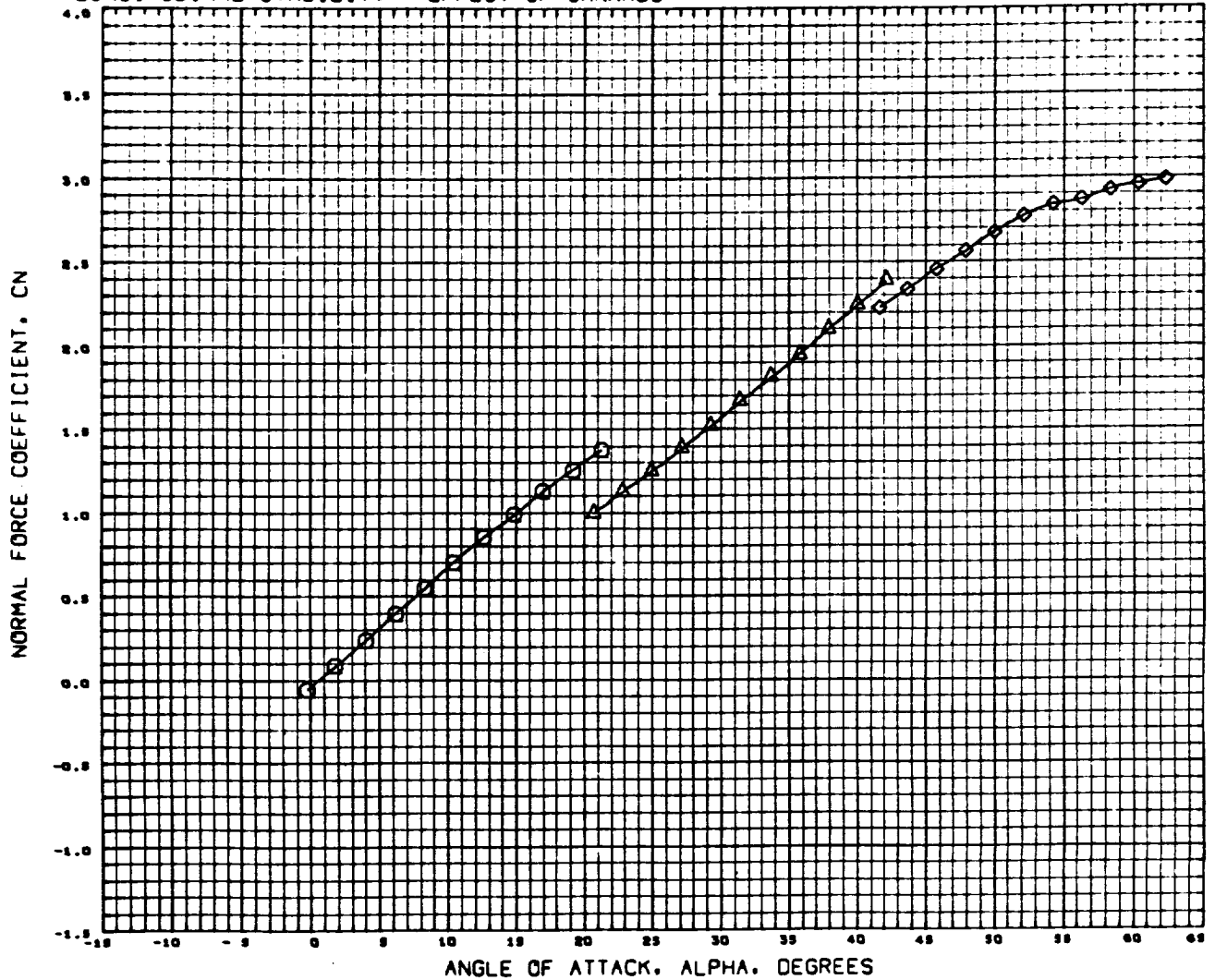
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION		
(E3629A)	○	M496-M5FC	AR11961-3	MODEL	W4B2C12V2	0.000	0.000	0.000	SREF 4.9327 50.1N.
(E3631M)	△	M496-M5FC	AR11961-3	MODEL	W4B2C12V2	0.000	0.000	-40.000	LREF 1.6980 1N.
(E3632K)	◇	M496-M5FC	AR11961-3	MODEL	W4B2C12V2	0.000	0.000	-60.000	SREF 3.7200 1N.
									XMRP 2.4000 1N.
									YMRP 0.0000 1N.
									ZMRP 0.0000 1N.
									SCALE 0.0025
MACH		0.903							

MACH 0.905

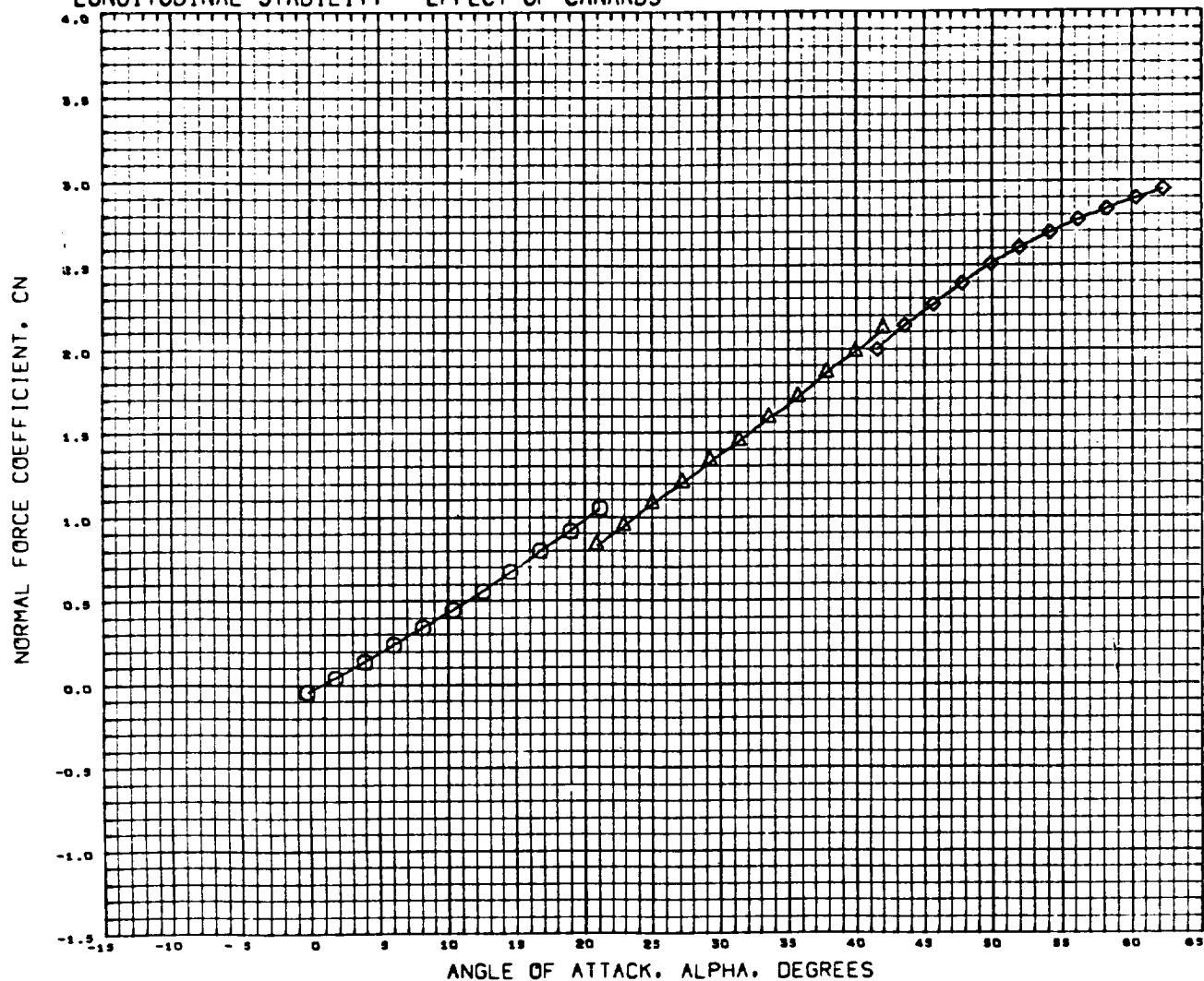
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-MSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 33. IN.
(E3031M)	M496-MSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.6960 IN.
(E3032K)	M496-MSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

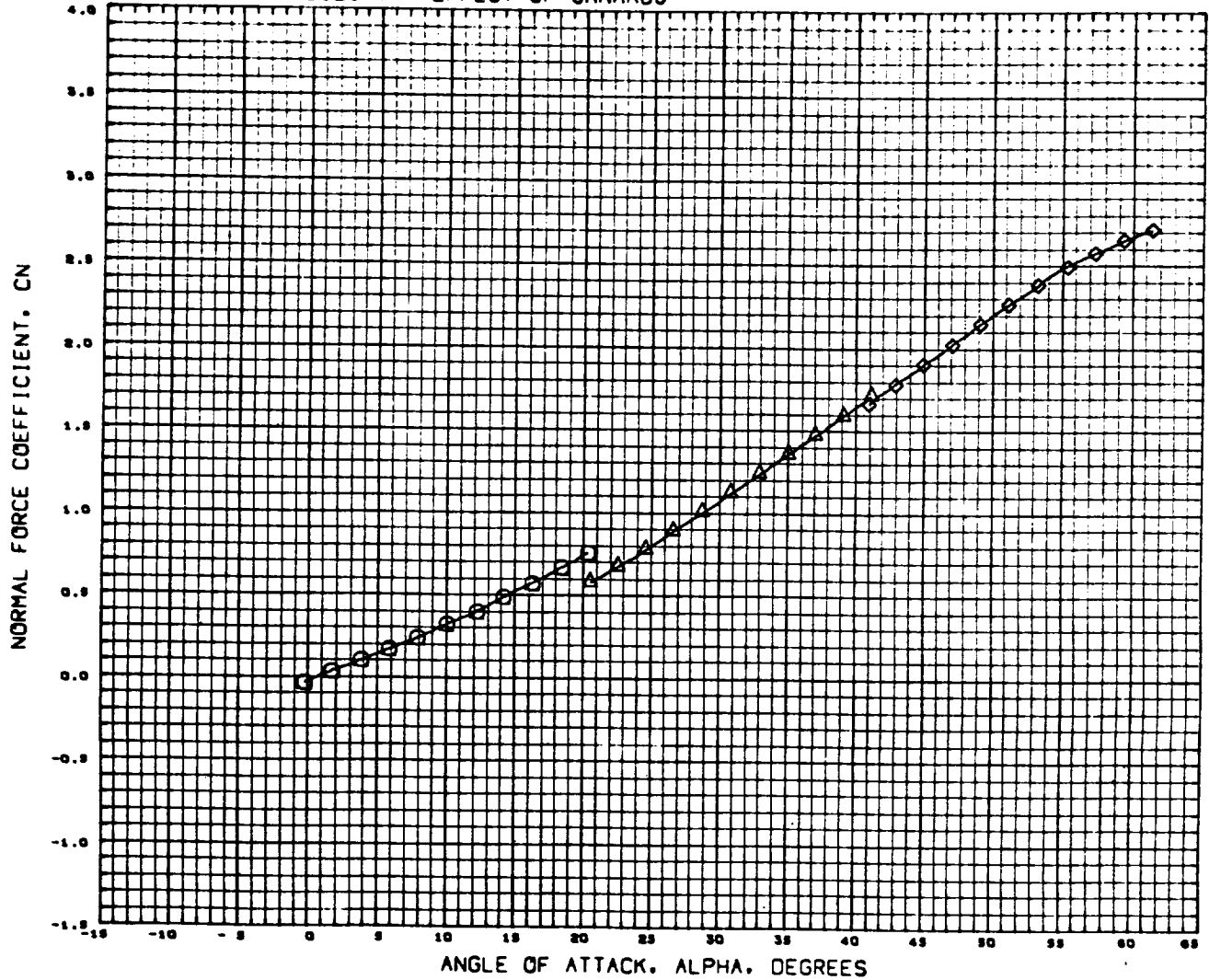
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3629A)	○	M496-MSFC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	BREF 4.9327 sq. in.
(E3631H)	△	M496-MSFC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 in.
(E3632K)	◇	M496-MSFC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 in.
							XMRP 2.4000 in.
							YMRP 0.0000 in.
							ZMRP 0.0000 in.
							SCALE 0.0025

MACH 1.963

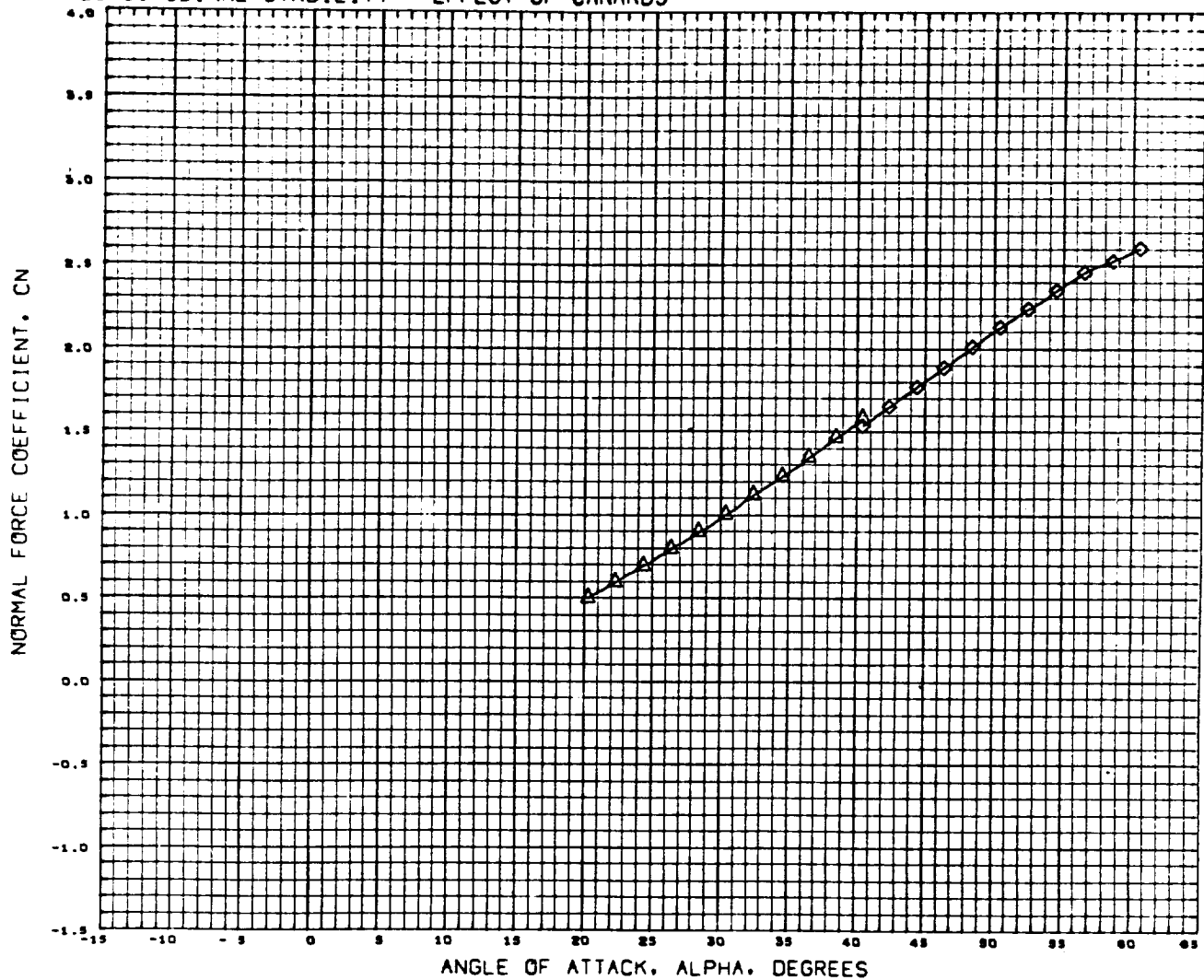
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-HSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 sq.in.
(E3831M)	M496-HSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 in.
(E3832K)	M496-HSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 in.
						XMRP 2.4000 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

MACH 3.400

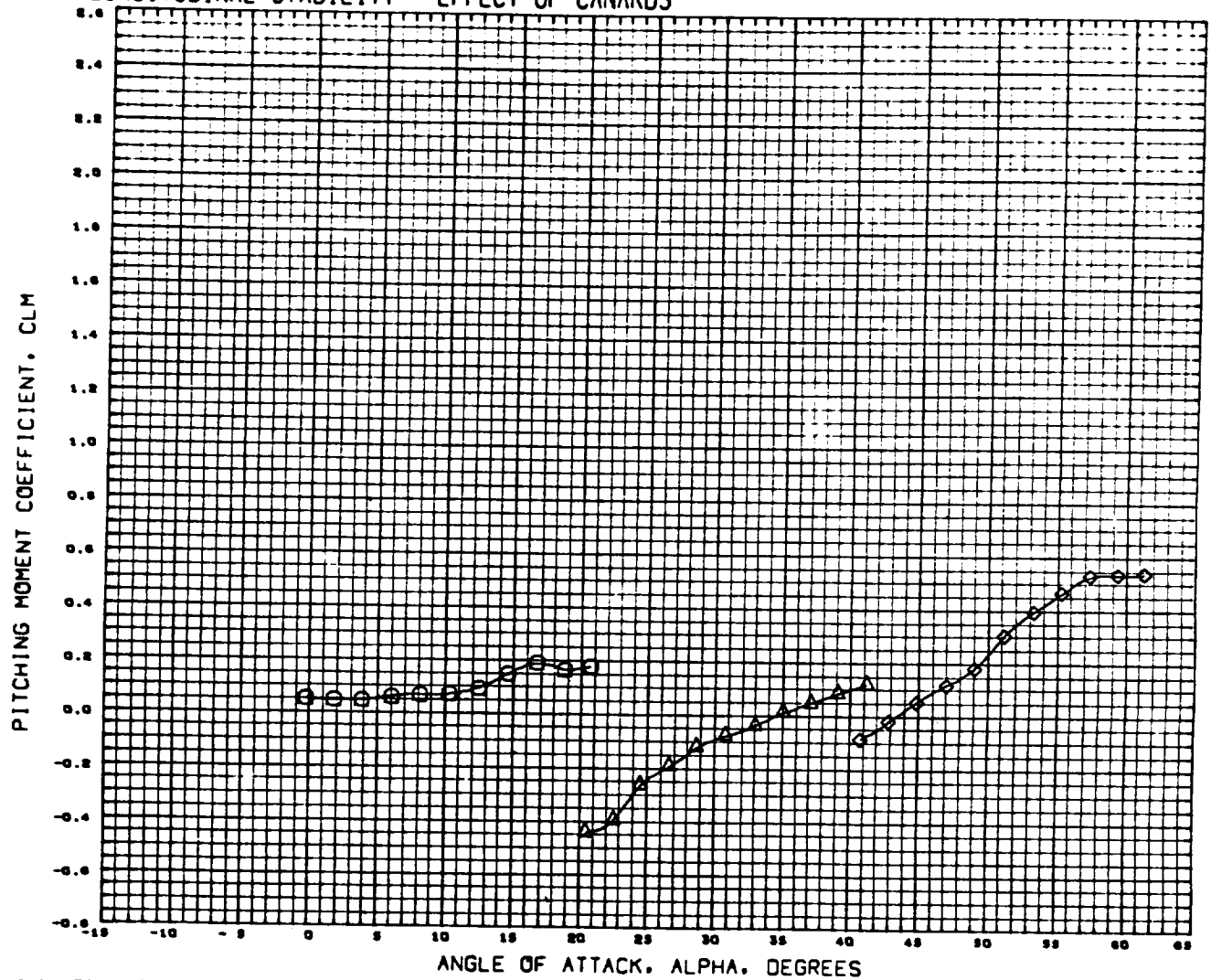
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3929A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.9327 50.1N.
(E3931H)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 1N.
(E3932K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 1N.
						XMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 4.959

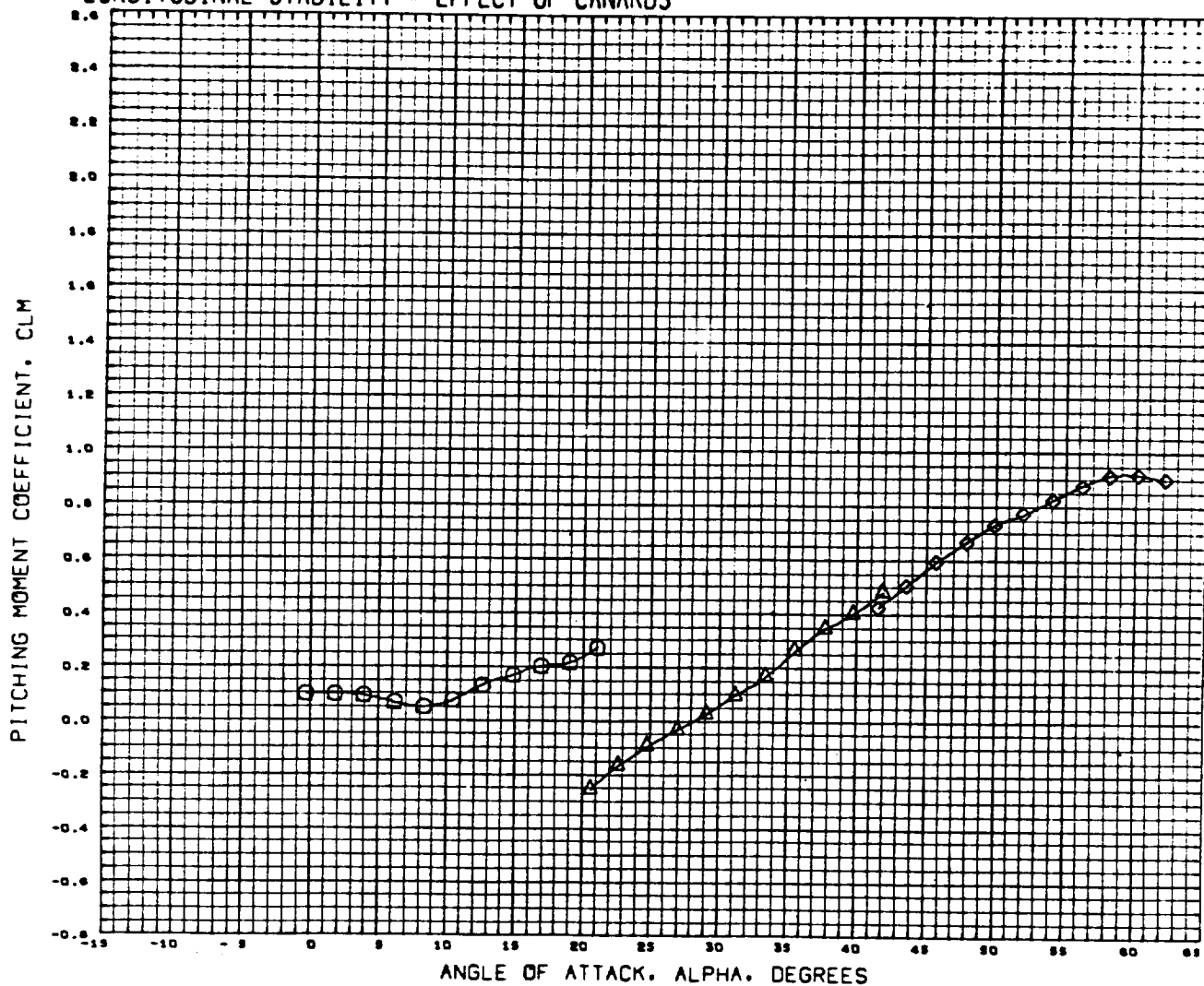
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-MSPC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREP 4.9327 SQ. IN.
(E3031H)	M496-MSPC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREP 1.8980 IN.
(E3032K)	M496-MSPC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREP 3.7200 IN.
						YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.599

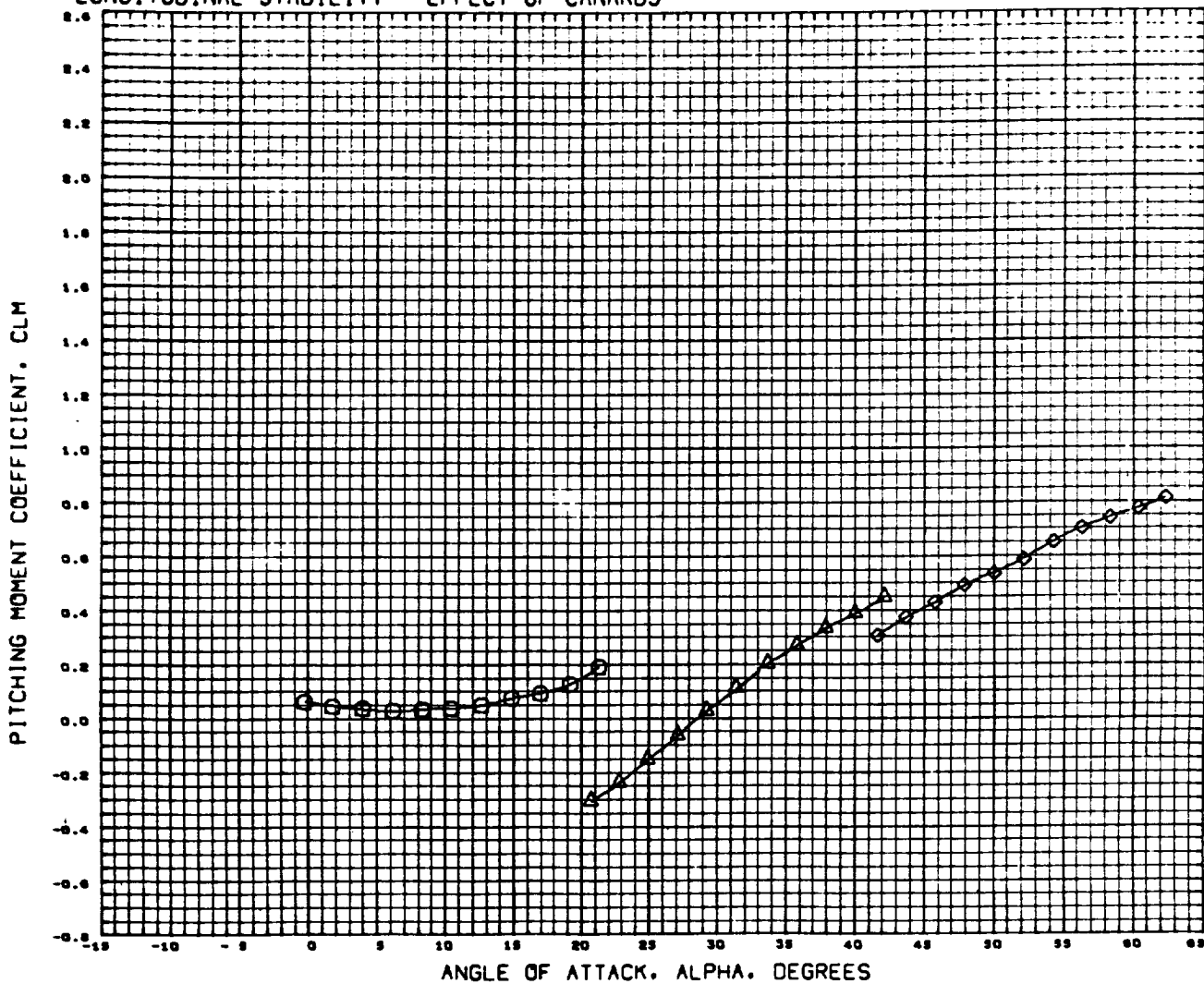
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3829A)	○	M496-M3FC	AR11981-3	W482C12V2	0.000	0.000	0.000	SRFP	4.9327 30. IN.
(E3831M)	△	M496-M3FC	AR11981-3	W482C12V2	0.000	0.000	0.000	LRFP	1.8980 IN.
(E3832K)	◇	M496-M3FC	AR11981-3	W482C12V2	0.000	0.000	0.000	SRFP	3.7200 IN.
								YMRP	2.4000 IN.
								ZMRP	0.0000 IN.
								SCALE	0.0025

MACH 0.905

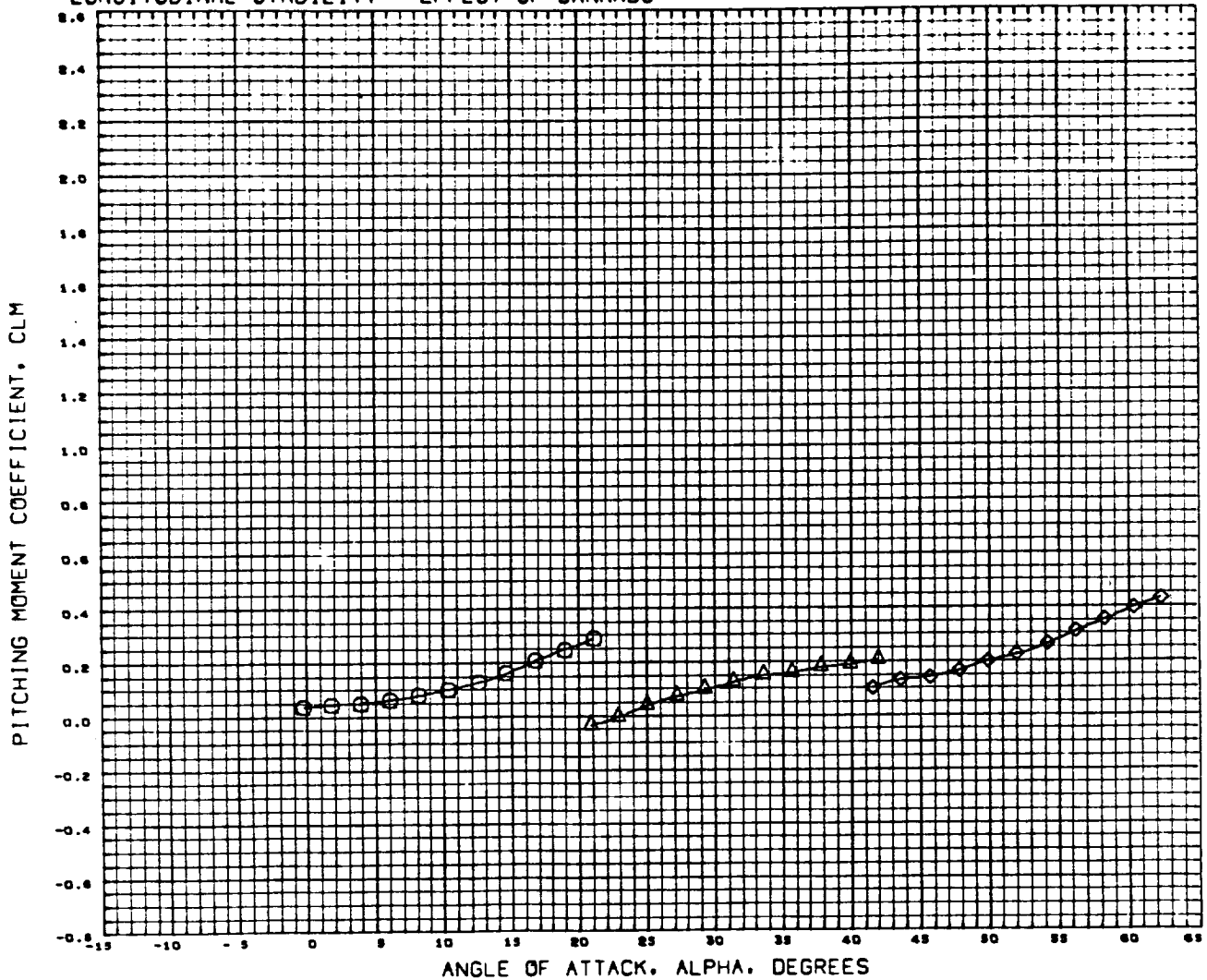
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3831M)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.9980 1N.
(E3832K)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 1N.
						XMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 1.197

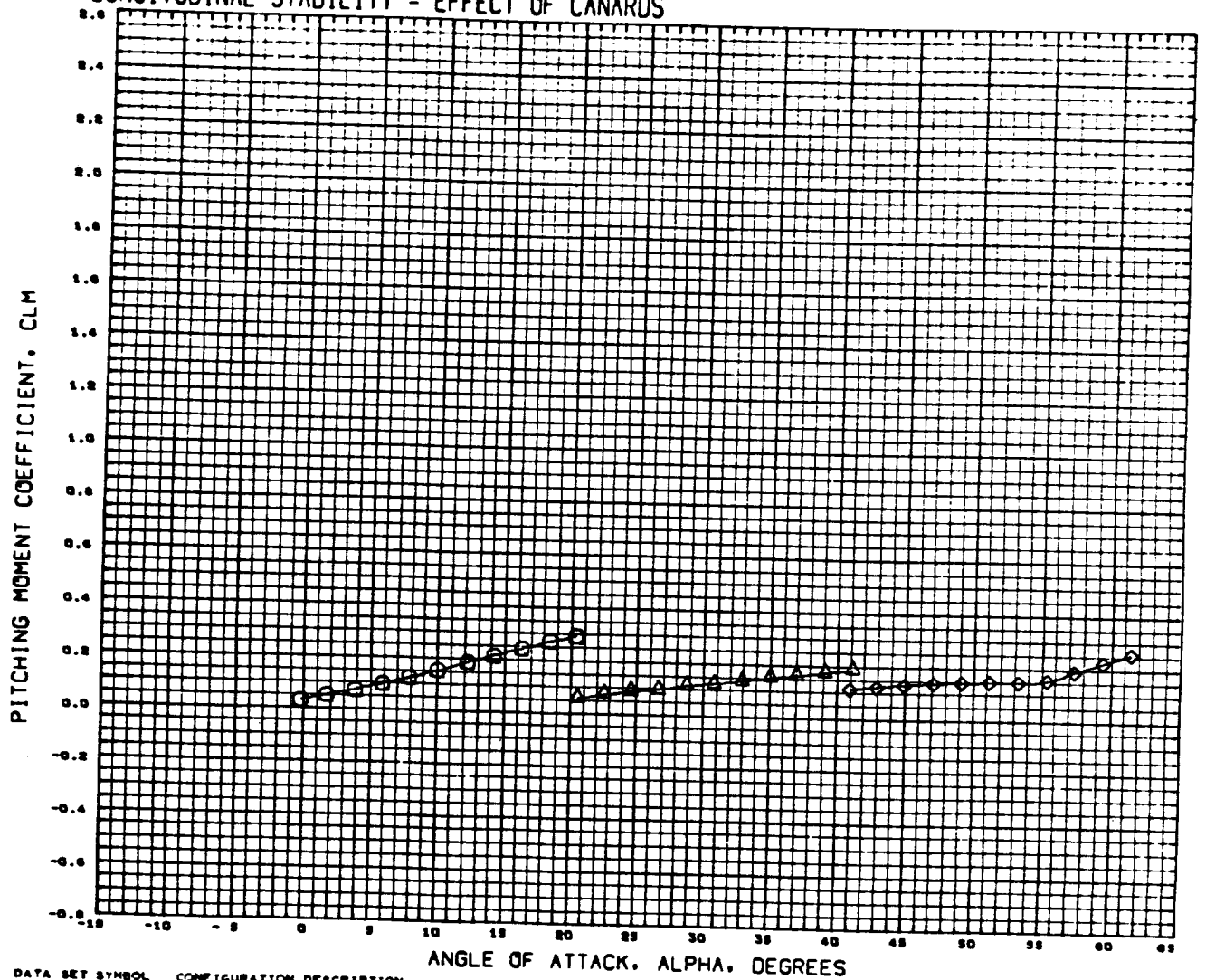
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30.IN.
(E3931M)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3832K)	M496-HSFC AR11991-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.963

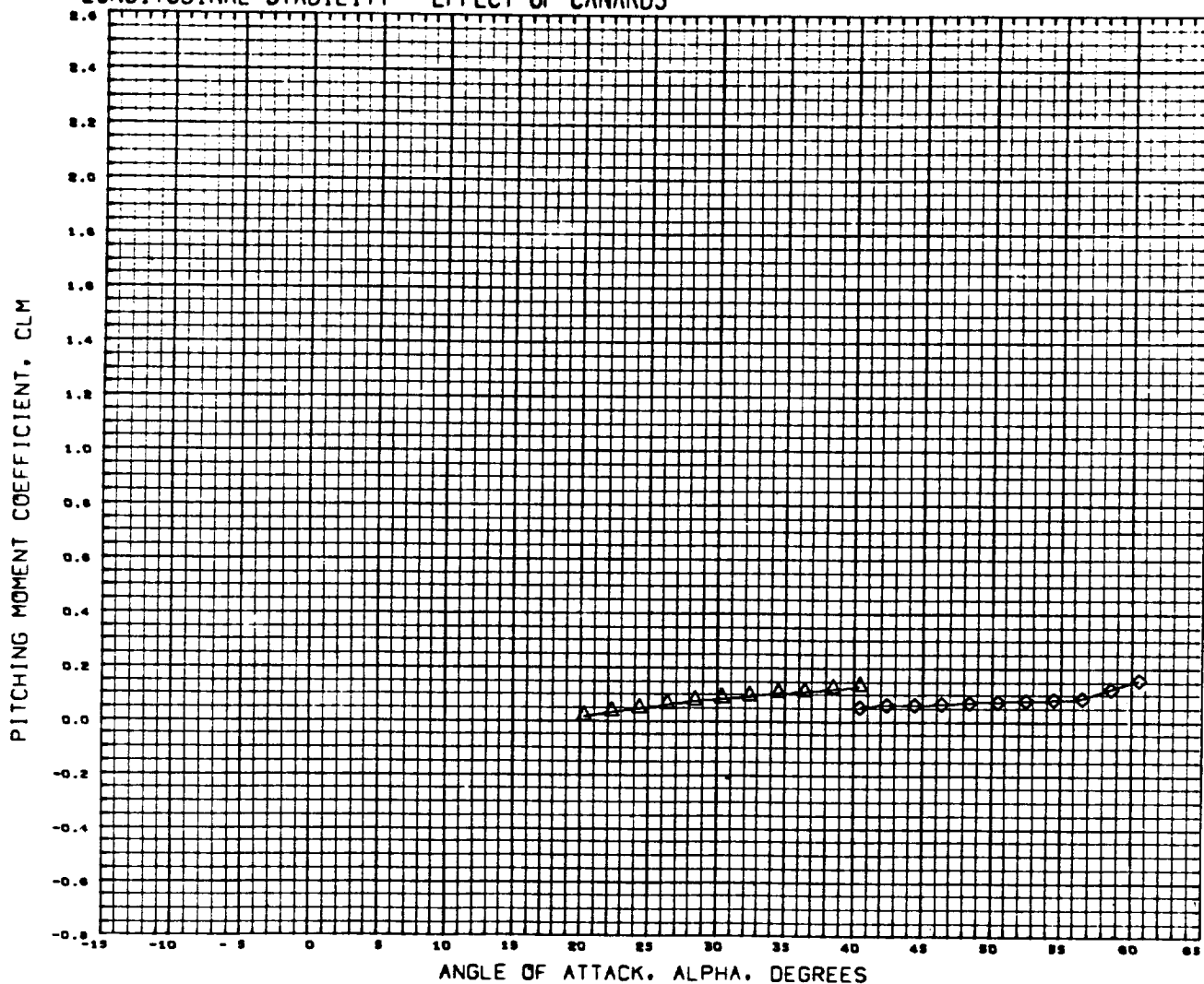
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	○	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	3REF 4.9327 33. IN.
(E3031H)	△	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3032K)	◇	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
							XMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 3.400

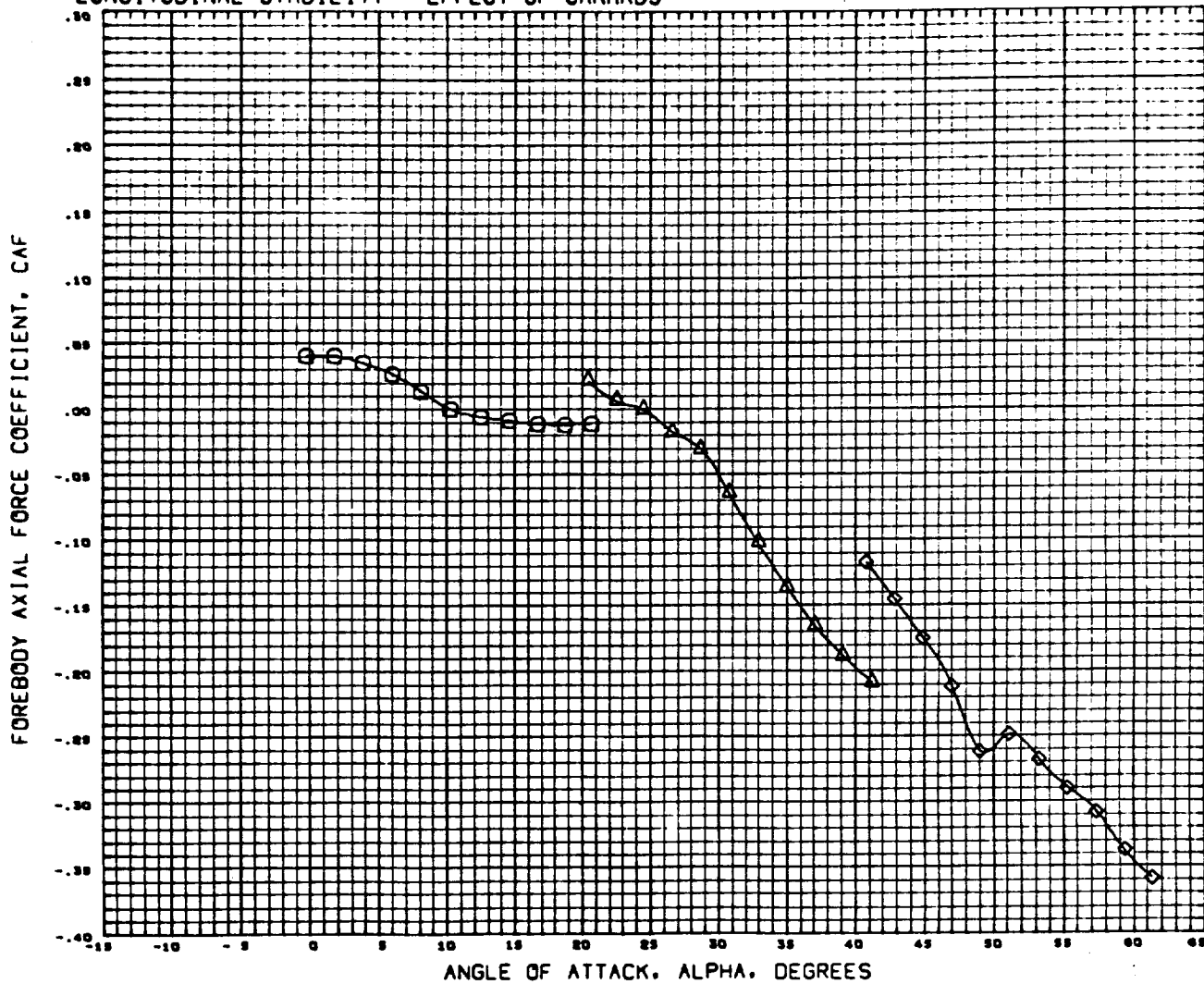
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3829A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.9327 SQ. IN.
(E3831M)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF	1.8960 IN.
(E3832K)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF	3.7200 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.959

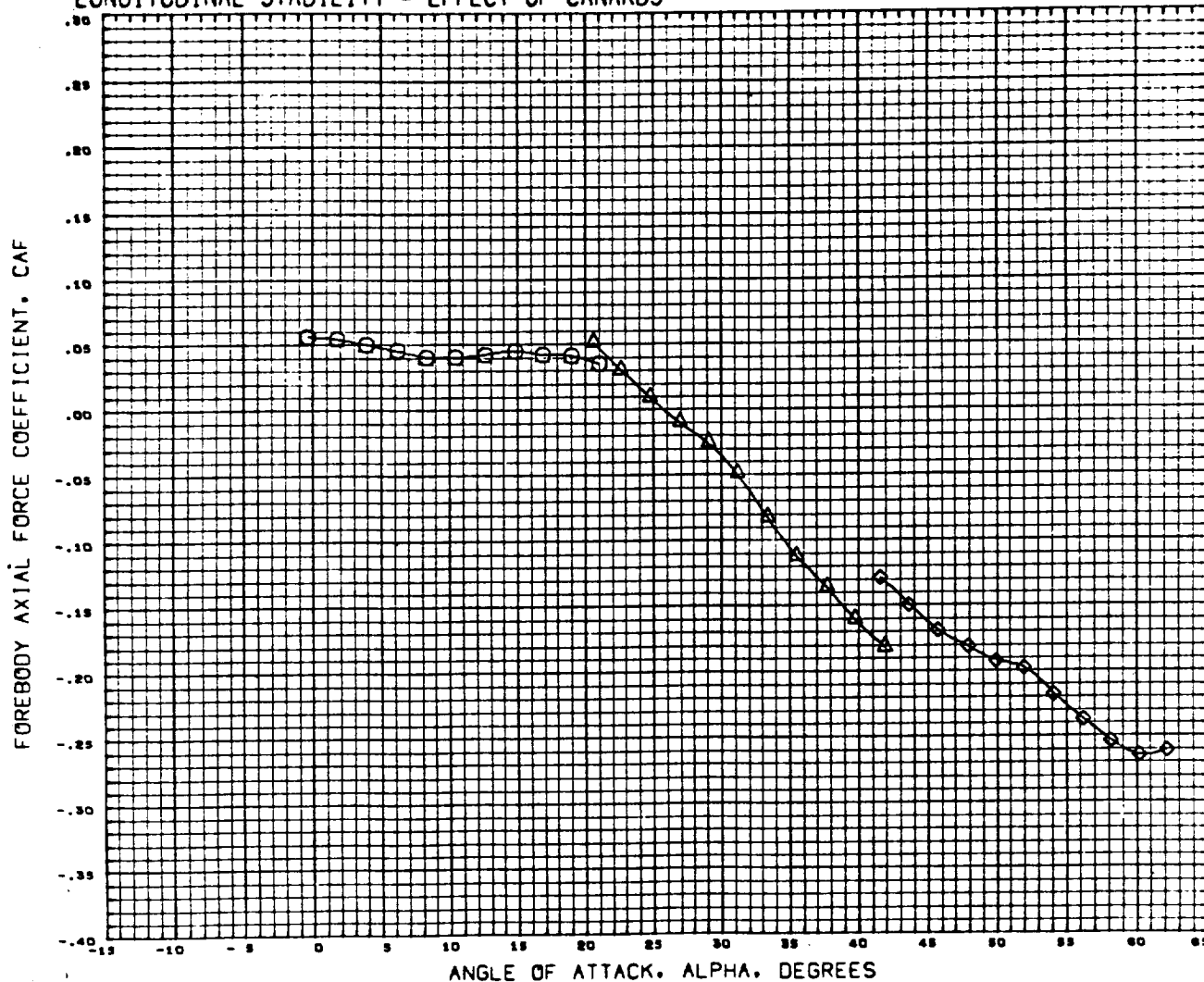
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-M3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 33. IN.
(E3031N)	M496-M3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3032K)	M496-M3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

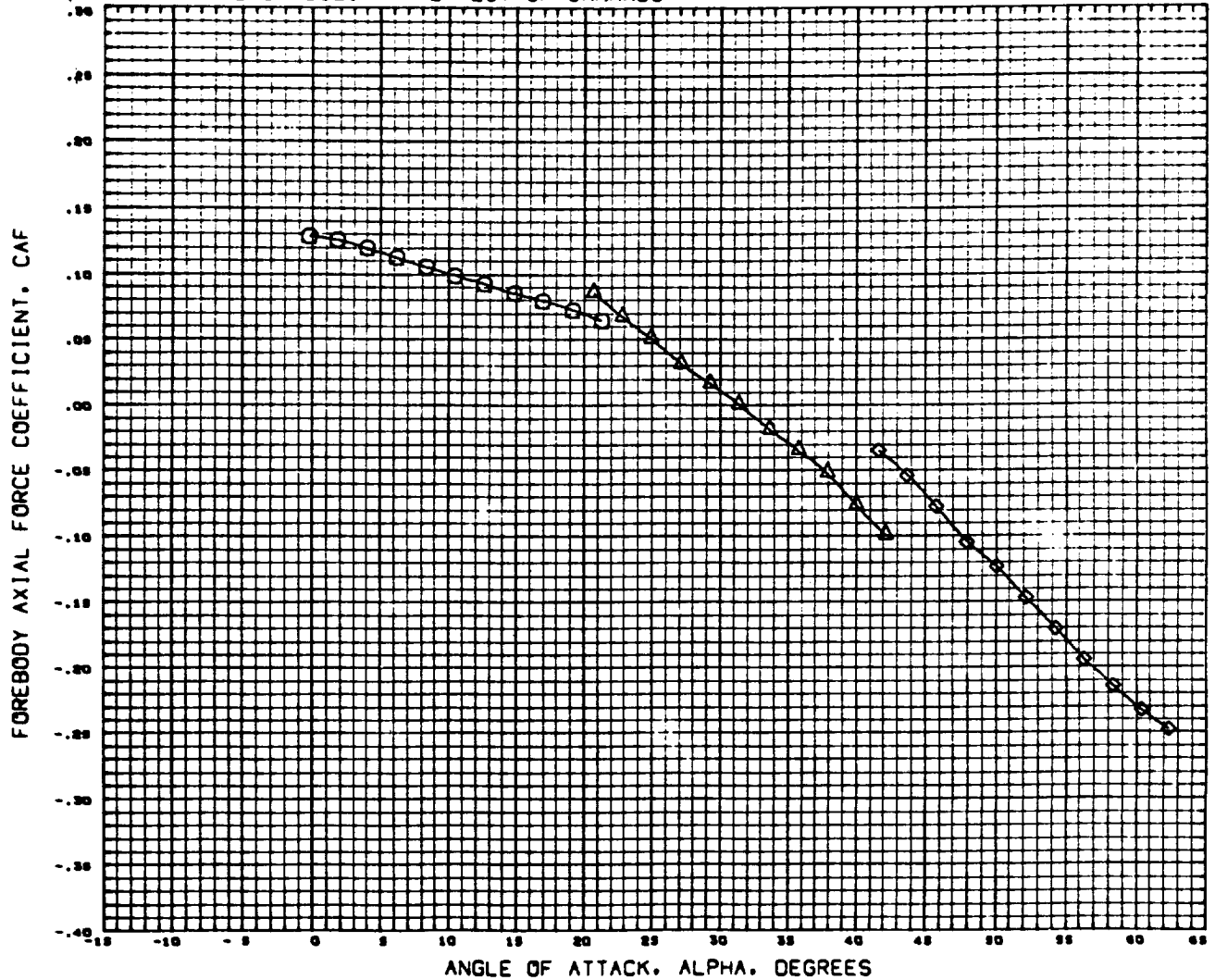
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3831M)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.0980 1N.
(E3832K)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 1N.
						KMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 0.905

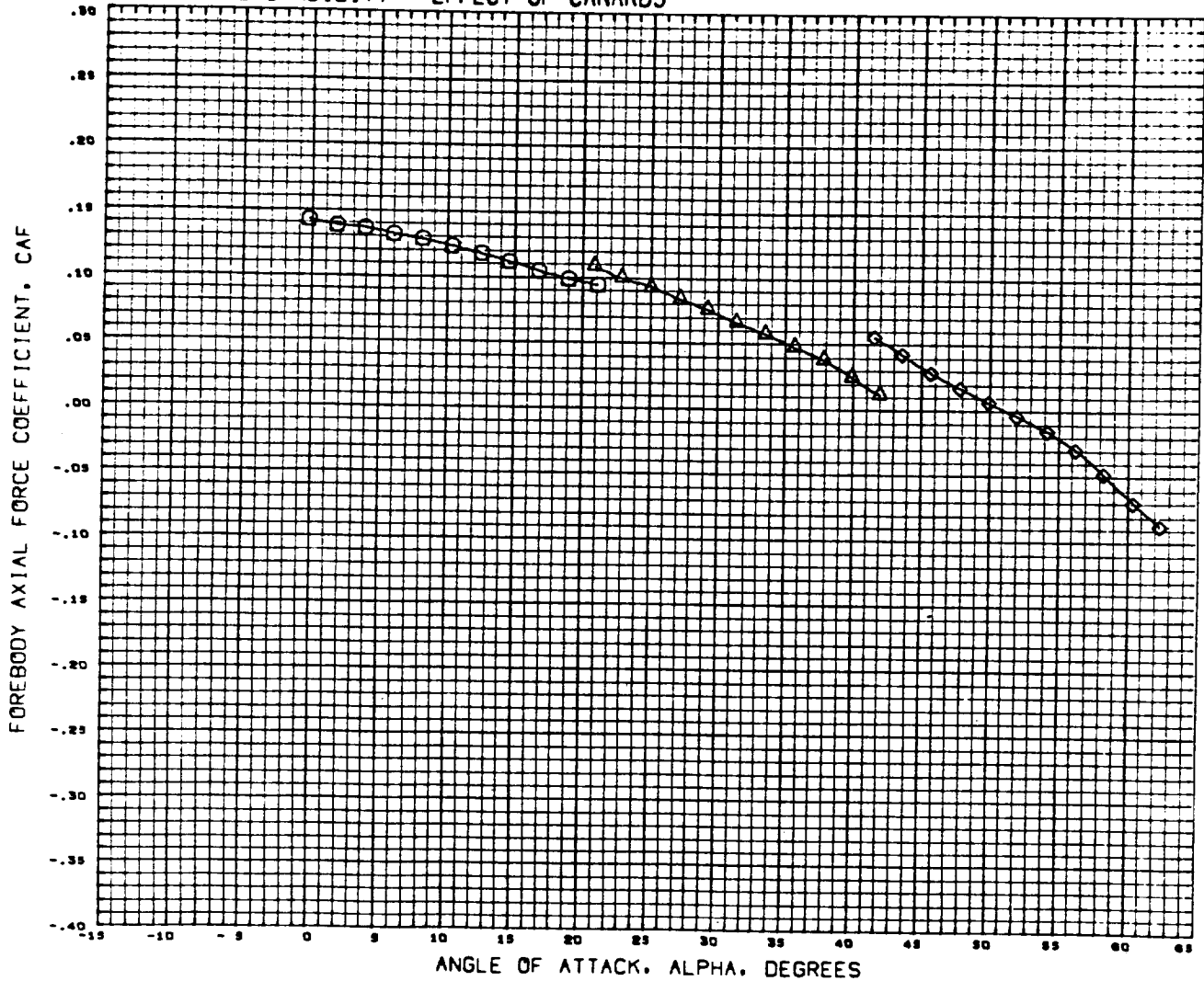
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	○	M496-M3FC	AR11901-3 MODEL	0.000	0.000	0.000	0.000	SREP 4.9327 34 IN.
(E3031M)	○	M496-M3FC	AR11901-3 MODEL	0.000	0.000	0.000	-40.000	LREP 1.8980 IN.
(E3032K)	○	M496-M3FC	AR11901-3 MODEL	0.000	0.000	0.000	-60.000	SRP 3.7200 IN.
								YMRP 2.4000 IN.
								YMRP 0.0000 IN.
								ZMRP 0.0000 IN.
								SCALE 0.0025

MACH 1.197

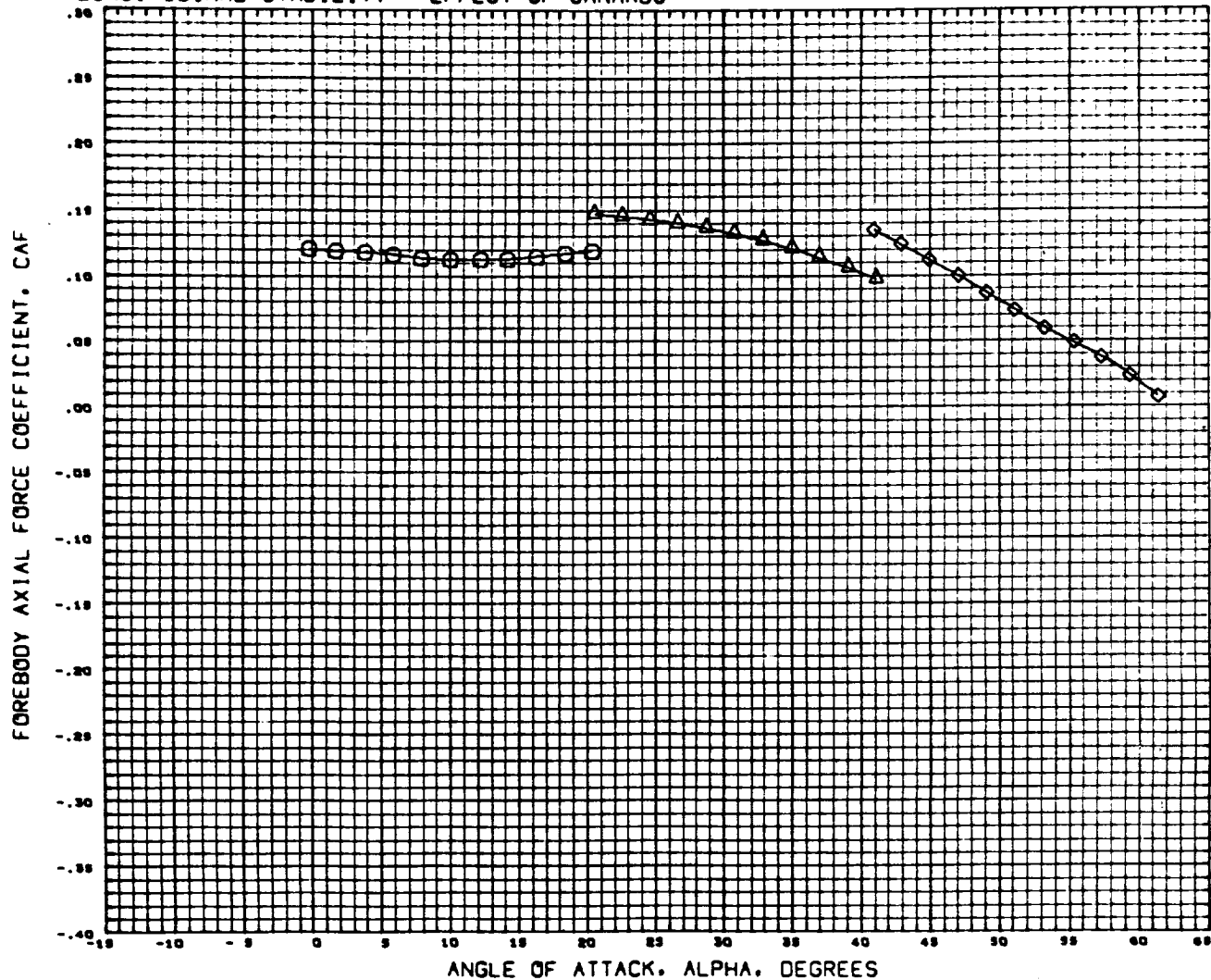
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3429A)	○	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3431H)	△	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3432K)	◇	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
							ENRP 2.4000 IN.
							YNRP 0.0000 IN.
							ZNRP 0.0000 IN.
							SCALE 0.0025

MACH 1.963

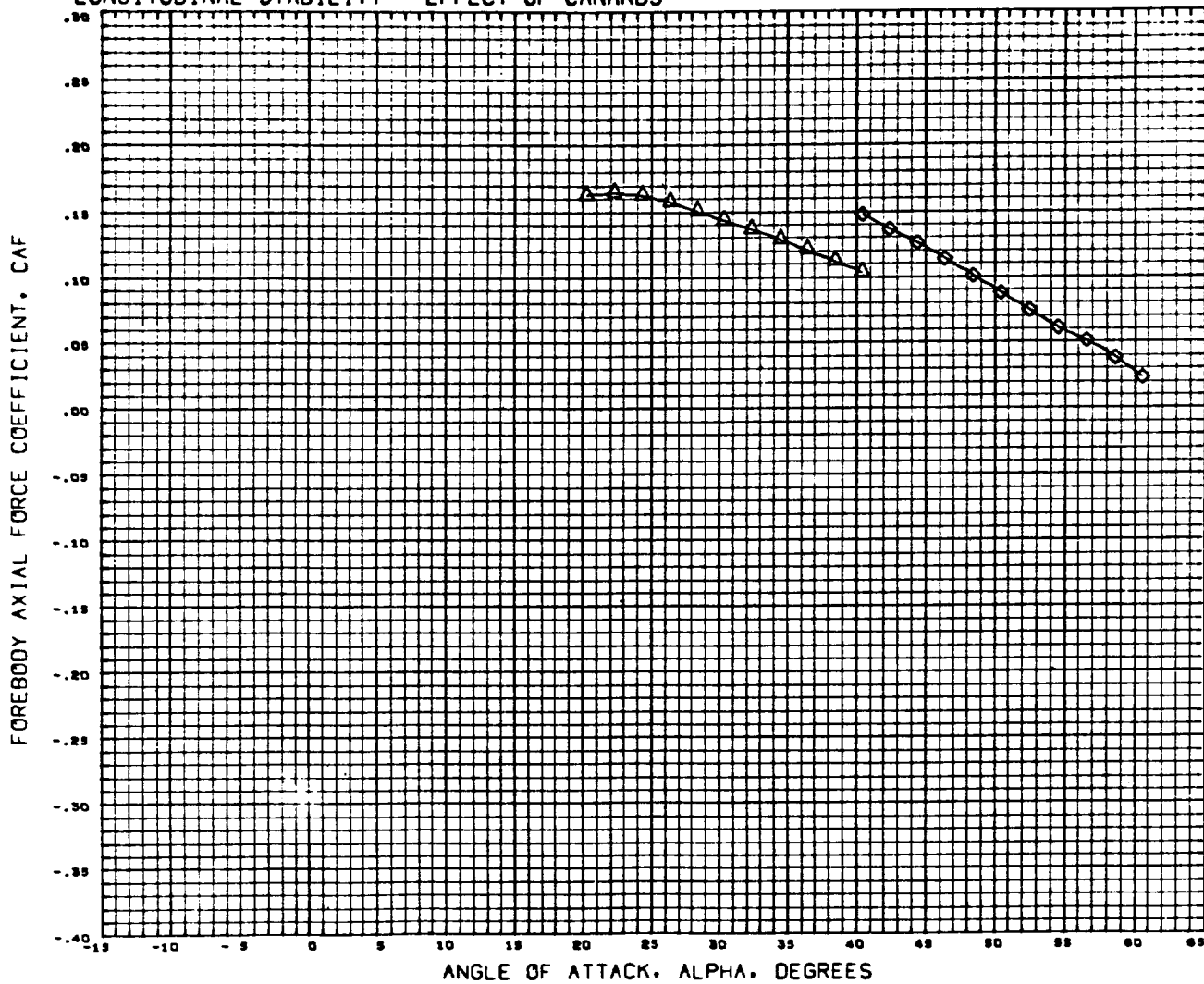
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-H3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031N)	M496-H3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.0980 IN.
(E3032K)	M496-H3FC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.480

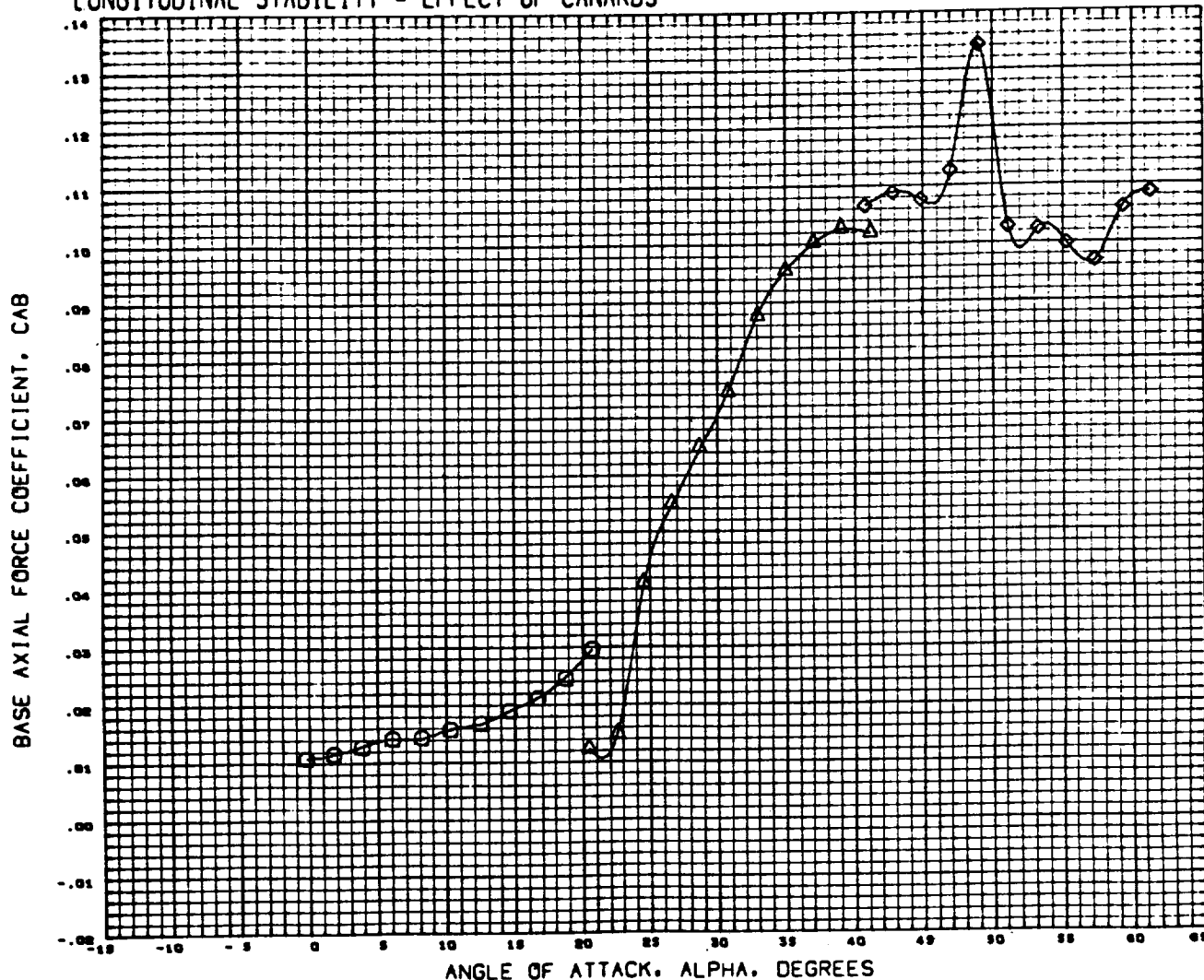
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)		DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.9327 80. IN.
(E3831M)		M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3832K)		M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
							XWRP 2.4000 IN.
							YWRP 0.0000 IN.
							ZWRP 0.0000 IN.
							SCALE 0.0025

MACH 4.959

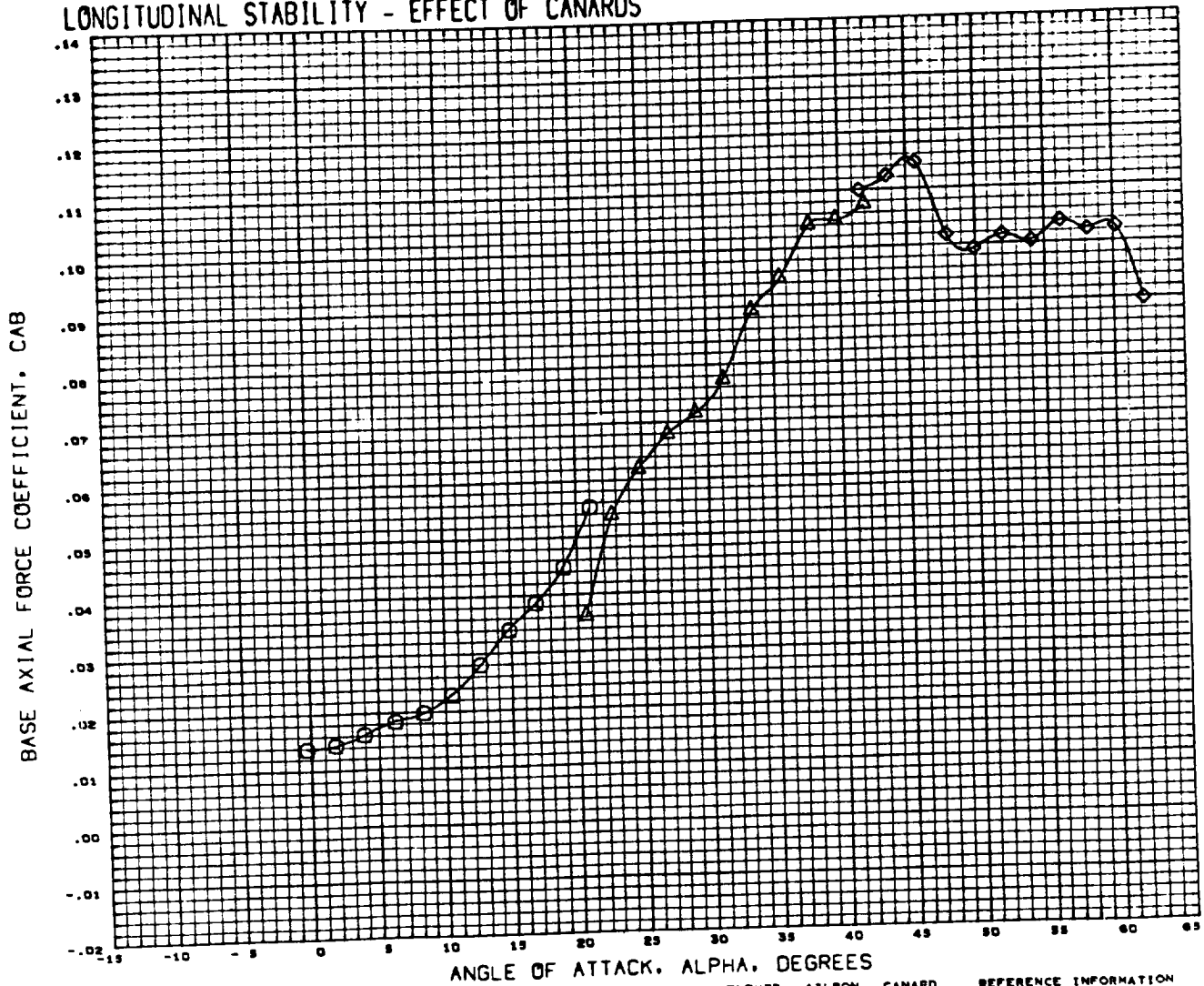
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3629A)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3631N)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3632R)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

LONGITUDINAL STABILITY - EFFECT OF CANARDS



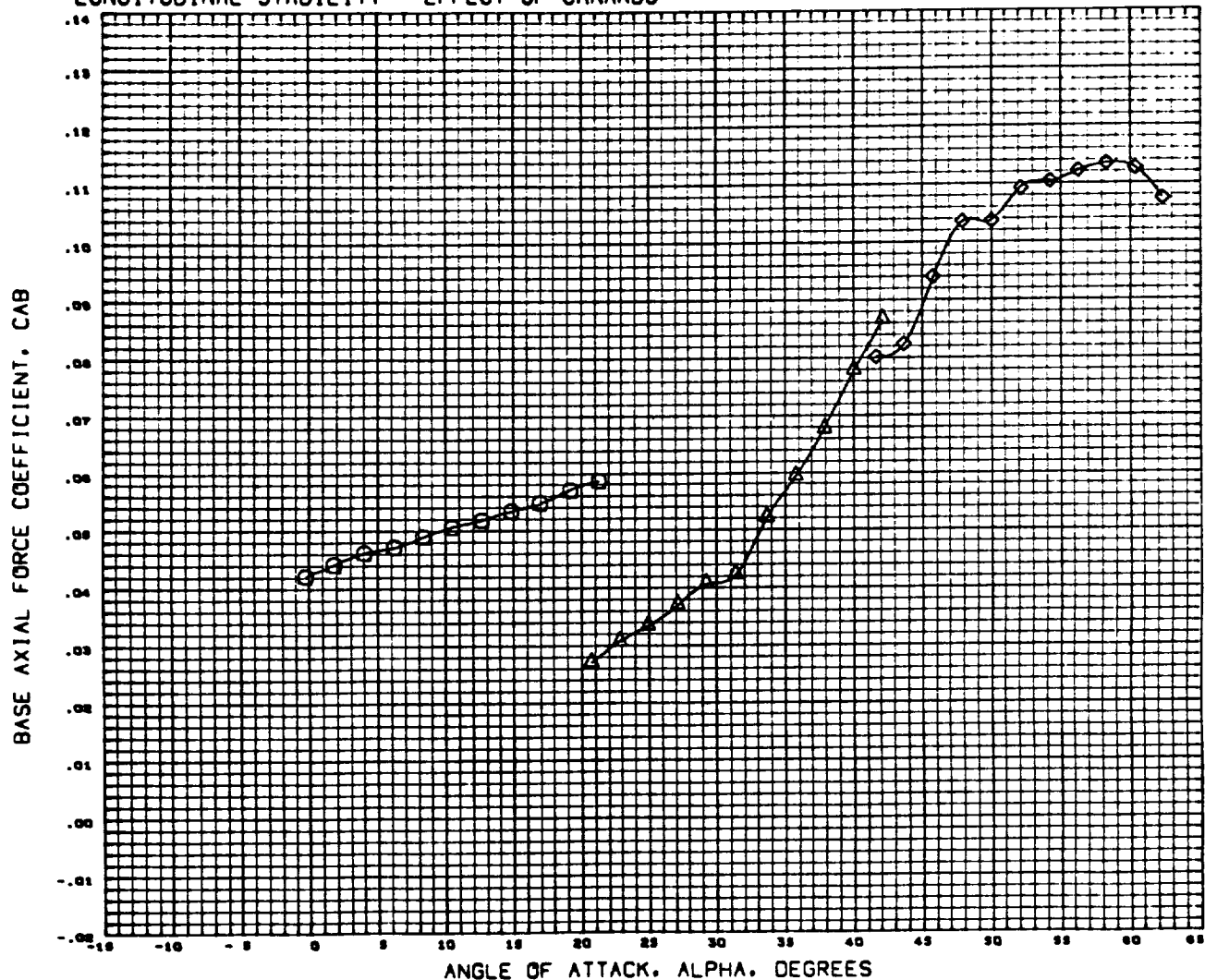
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(E3829A) ○ M496-HSFC AR11981-3 MODEL W482C12V2
(E3831M) △ M496-HSFC AR11981-3 MODEL W482C12V2
(E3832K) ◇ M496-HSFC AR11981-3 MODEL W482C12V2

BETA 0.000 ELEVTR 0.000 AILRON 0.000 CANARD 0.000
0.000 0.000 0.000 -40.000
0.000 0.000 0.000 -60.000

REFERENCE INFORMATION
SREF 4.9327 SQ. IN.
LREF 1.8960 IN.
BREF 3.7200 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

MACH 0.905

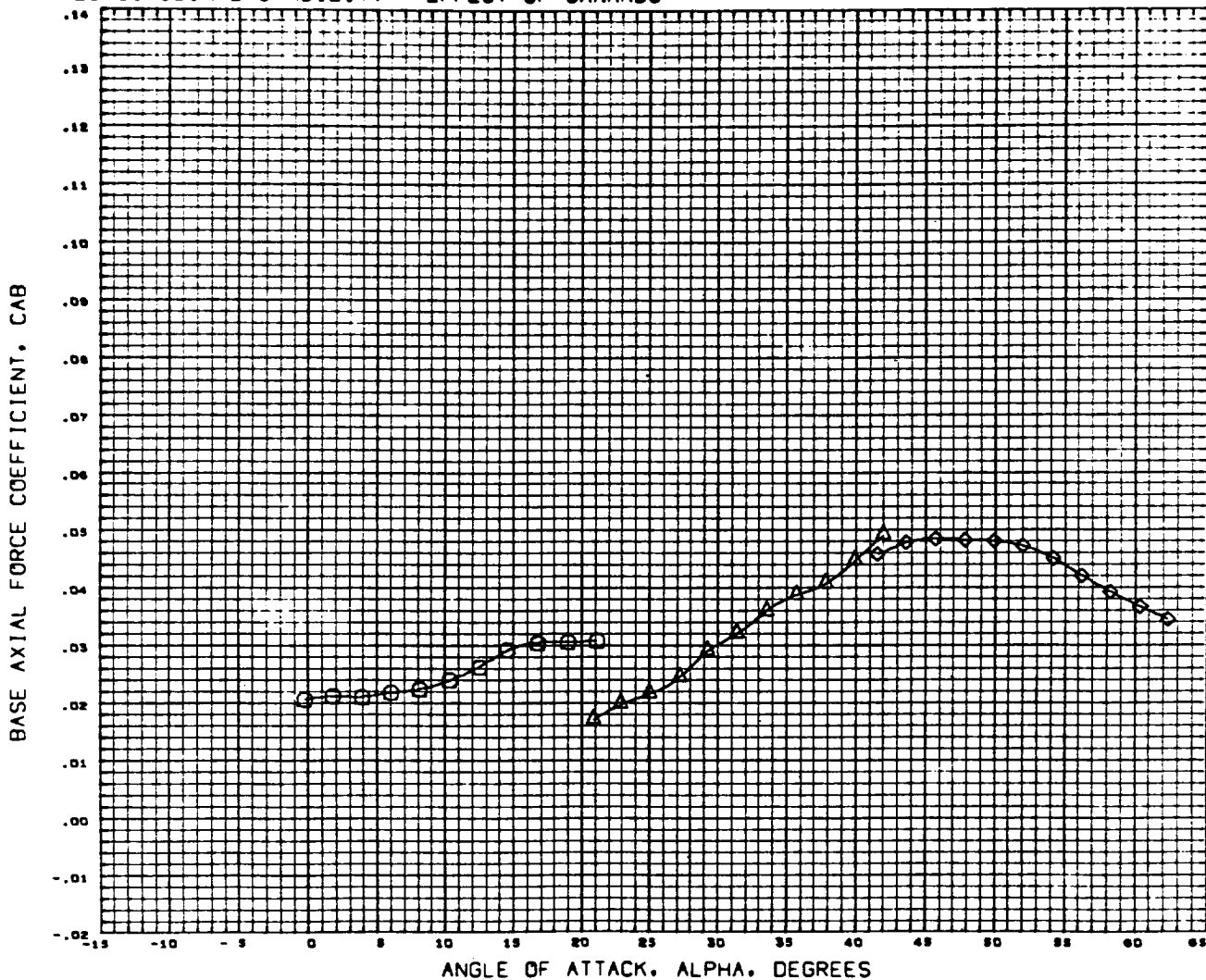
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 40. IN.
(E3031H)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3032K)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

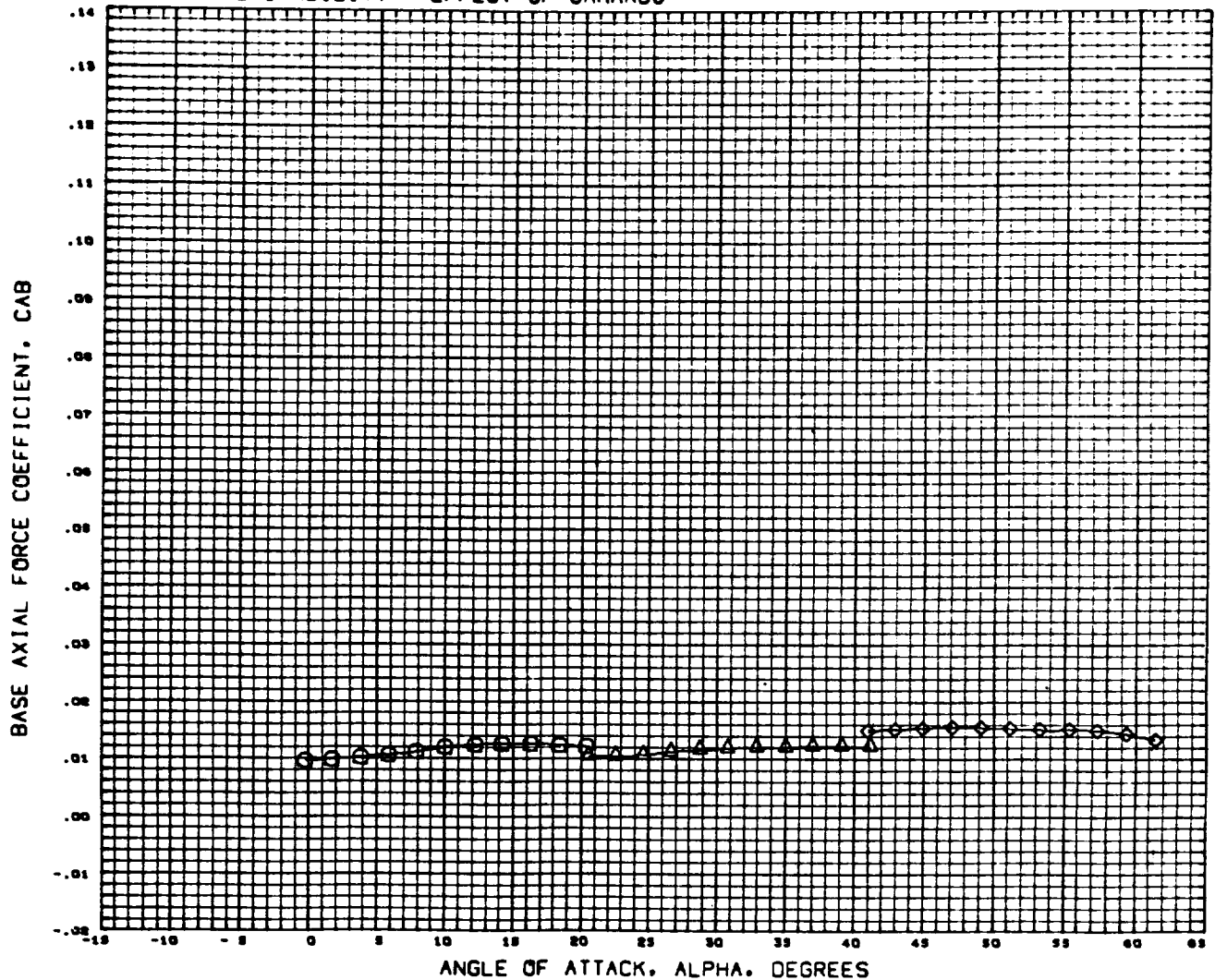
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	○	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 50. IN.
(E3831M)	△	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3832K)	◇	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
							XMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 1.963

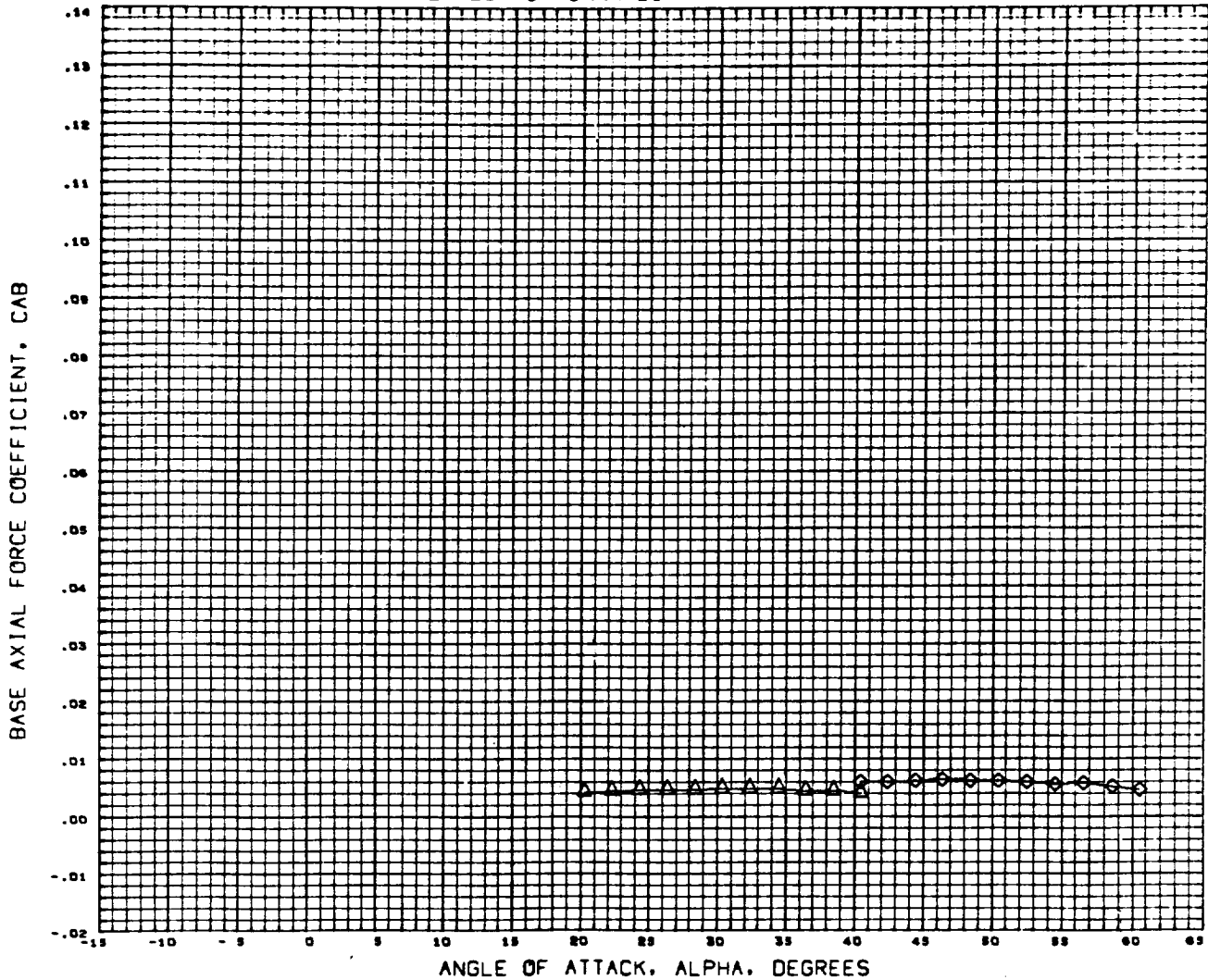
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	○	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031M)	△	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	-40.000	LREF 1.8580 IN.
(E3032K)	◇	M496-MSFC AR11981-3 MODEL	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
							YMRP 2.4000 IN.
							YMRP 0.0000 IN.
							ZMRP 0.0000 IN.
							SCALE 0.0025

MACH 3.400

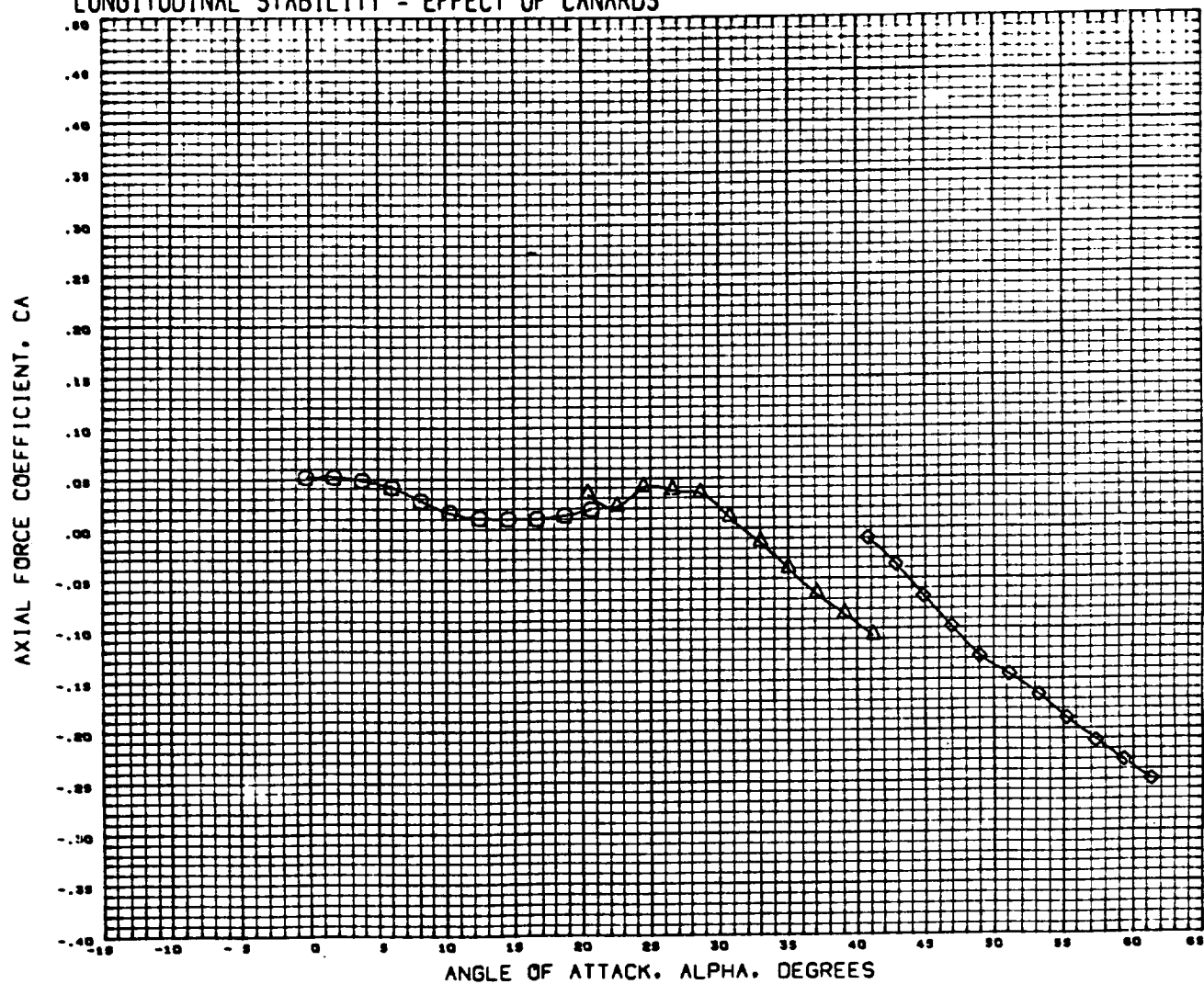
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3029A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.9327 SQ. IN.
(E3031M)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF	1.8980 IN.
(E3032K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	BREF	3.7200 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.959

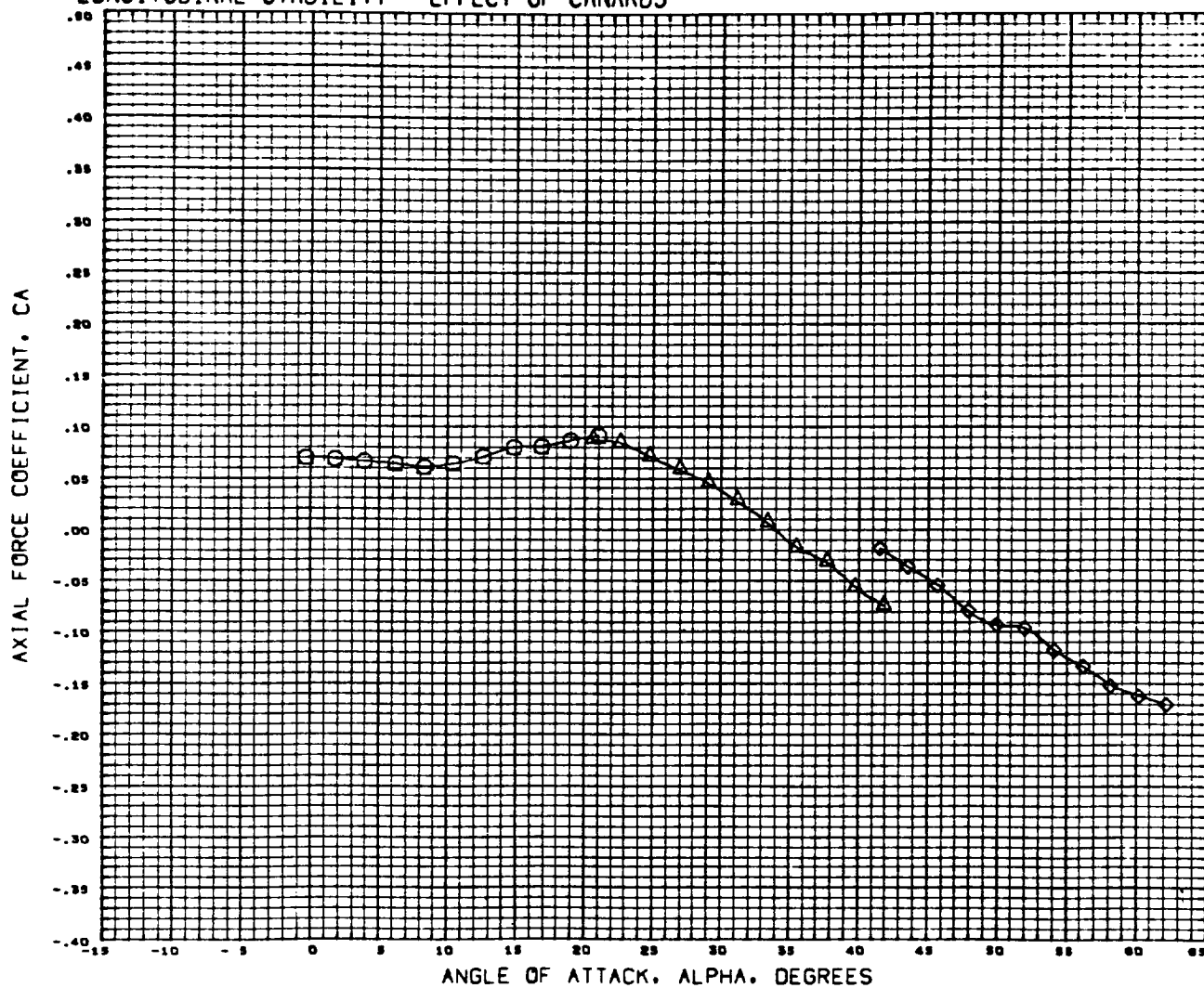
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3029A)	○	N496-MSFC	AR11901-3 MODEL	0.000	0.000	0.000	0.000	SREF	4.9327 SQ. IN.
(E3031M)	△	N496-MSFC	AR11901-3 MODEL	0.000	0.000	0.000	-40.000	LREF	1.8980 IN.
(E3032K)	◇	N496-MSFC	AR11901-3 MODEL	0.000	0.000	0.000	-60.000	BREF	3.7200 IN.
								XMRP	2.4000 IN.
								YMRP	0.0000 IN.
								ZMRP	0.0000 IN.
								SCALE	0.0025

MACH 0.599

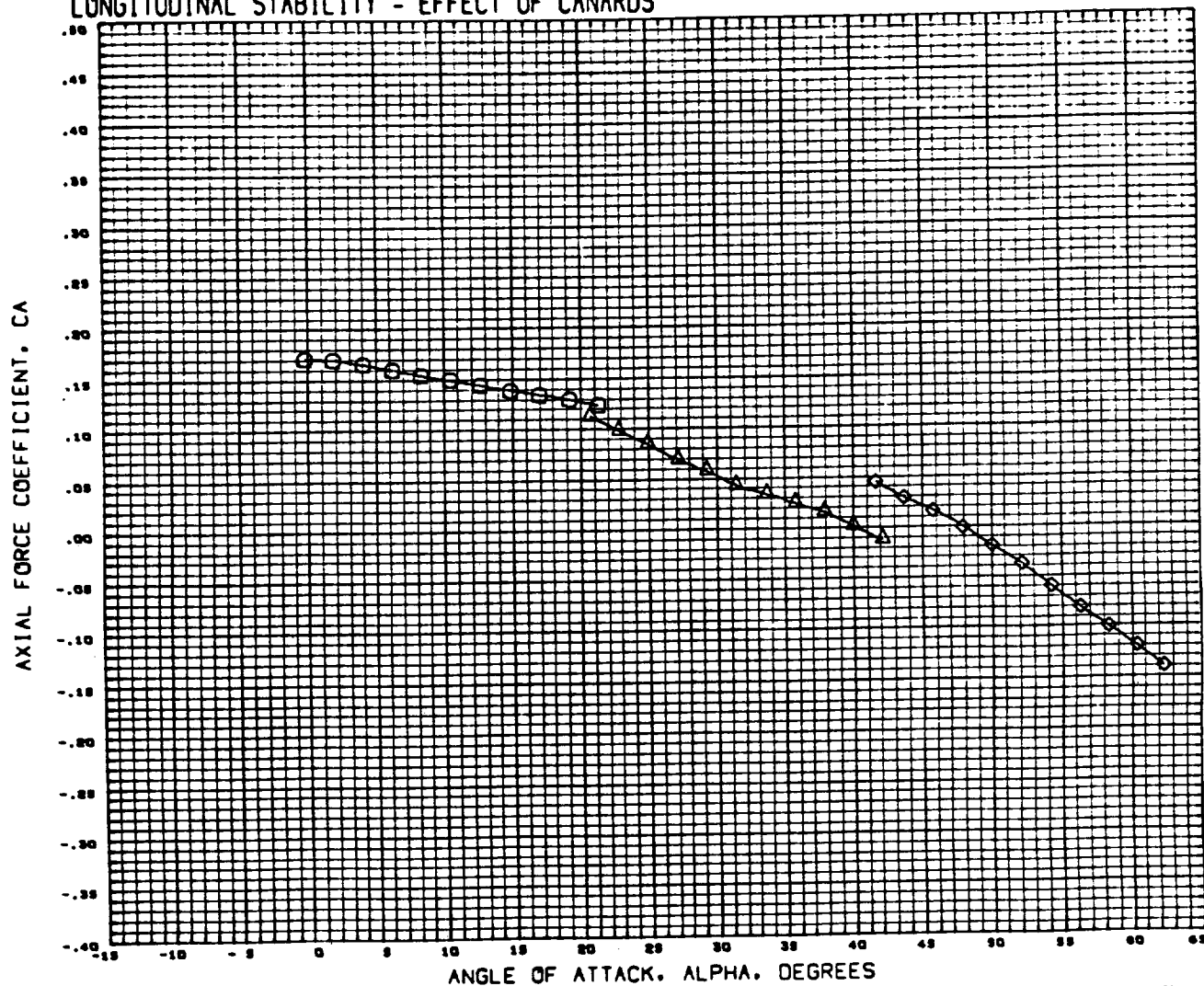
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3629A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 50. IN.
(E3631H)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3632K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023

MACH 0.905

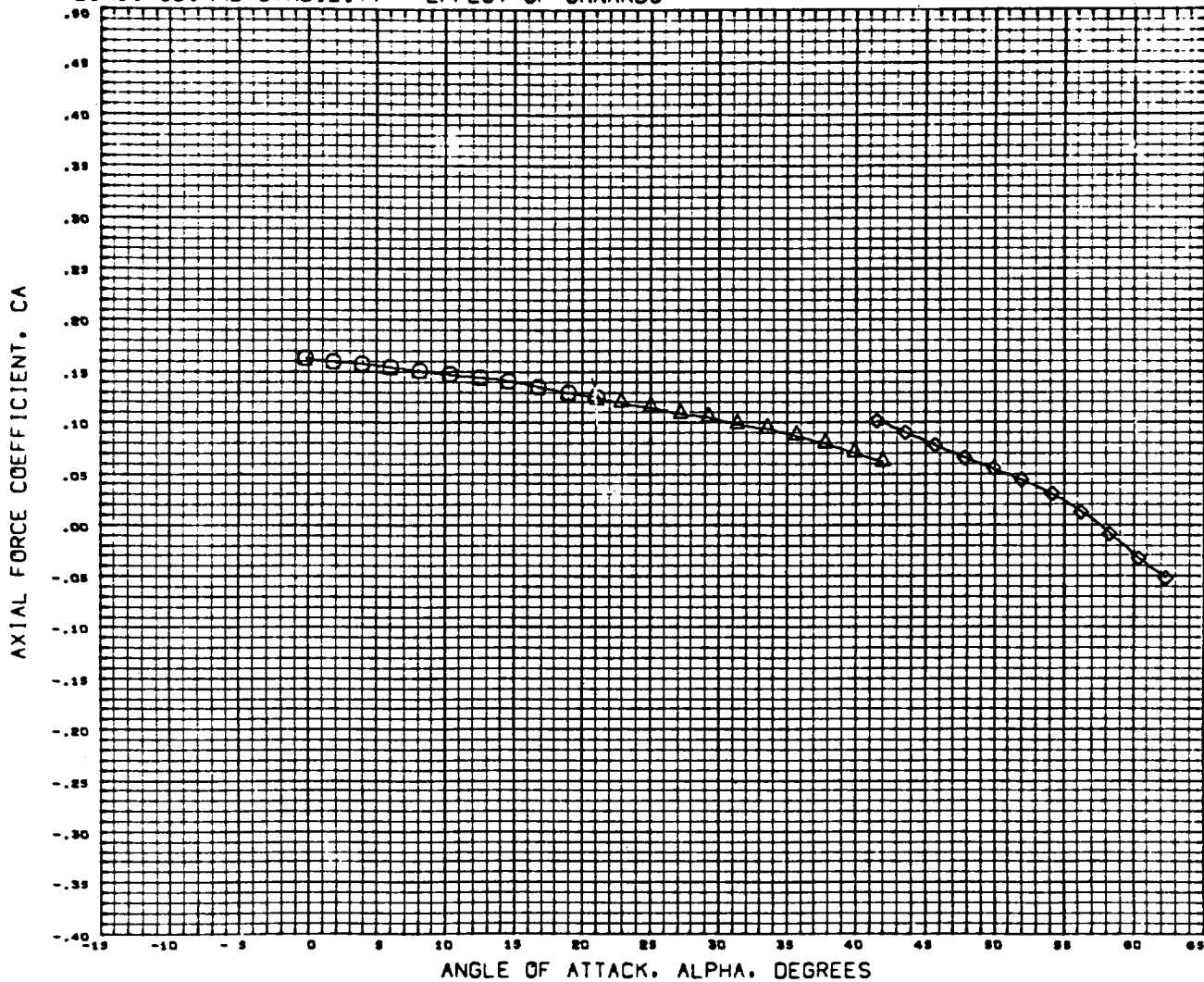
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-M3PC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3031M)	M496-M3PC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 1N.
(E3032K)	M496-M3PC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 1N.
						XMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

MACH 1.107

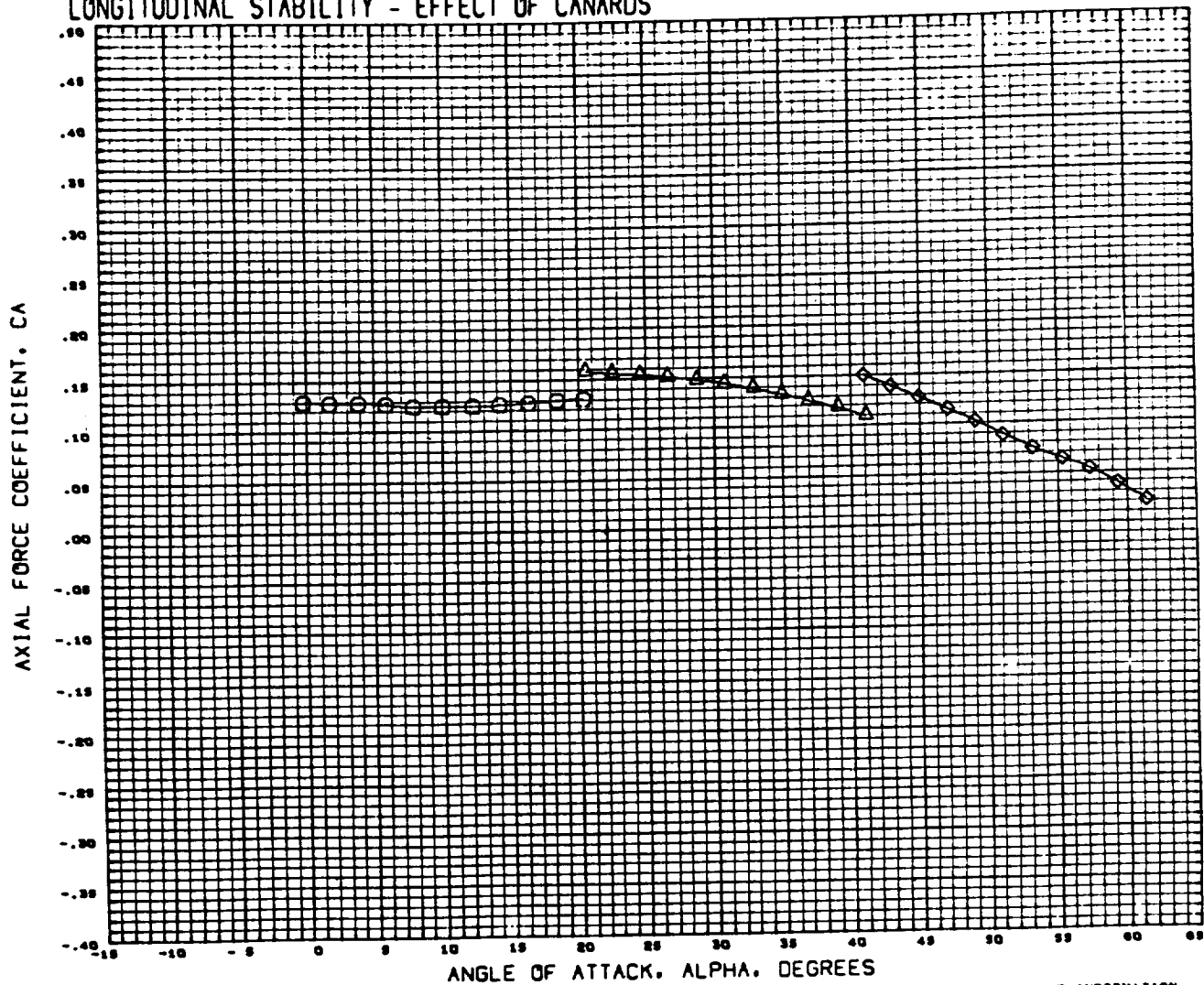
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION					
(E3029A)	○	M496-MSFC	AR11901-3	MODEL	W4B2C12V2	0.000	0.000	0.000	0.000	SREF	4.9327	SQ. IN.
(E3031H)	△	M496-MSFC	AR11901-3	MODEL	W4B2C12V2	0.000	0.000	0.000	-40.000	LREF	1.8980	IN.
(E3032K)	◇	M496-MSFC	AR11901-3	MODEL	W4B2C12V2	0.000	0.000	0.000	-60.000	BREF	3.7200	IN.
										XMRP	2.4000	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0025	

MACH 1.963

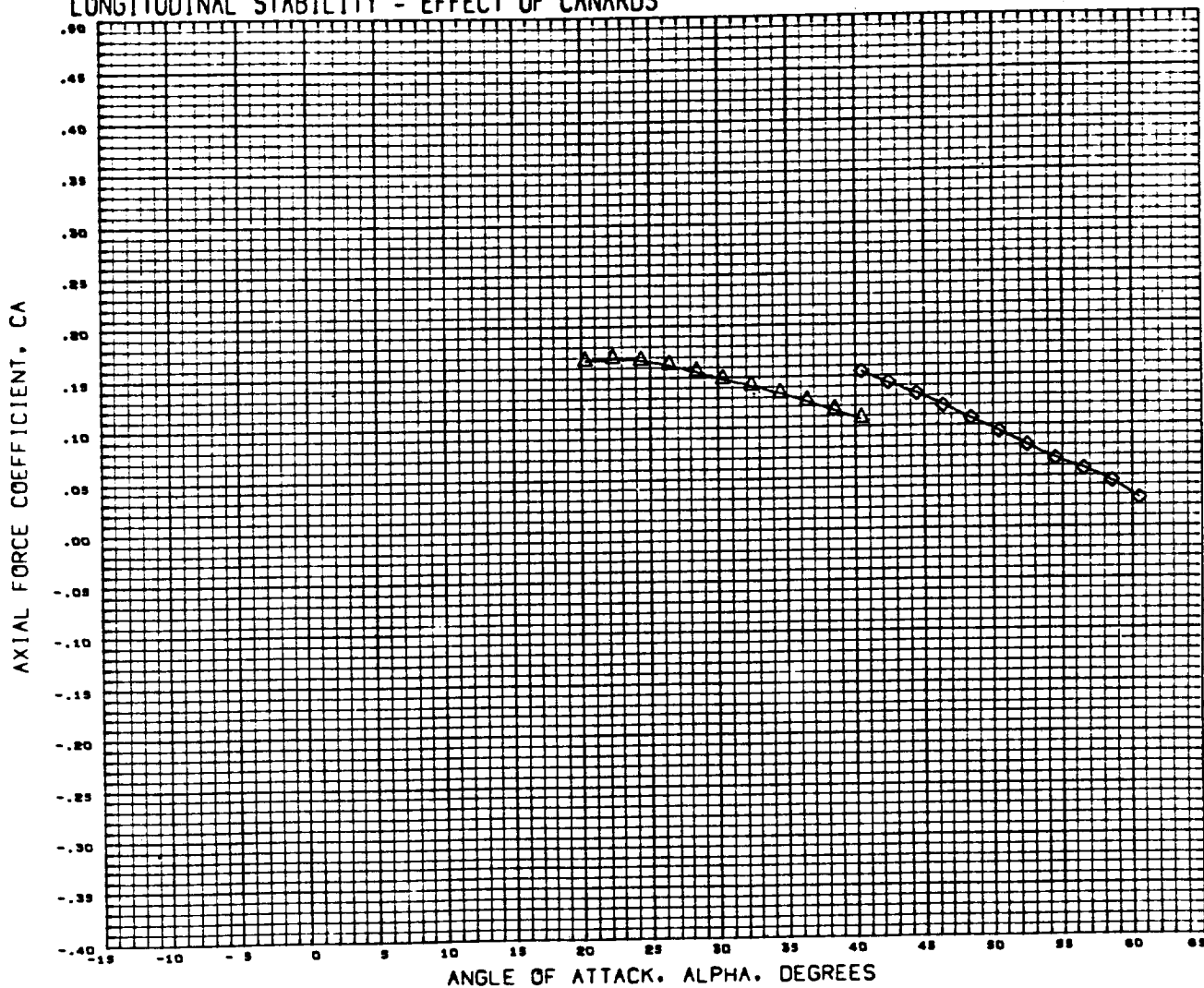
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-NSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 50.1N.
(E3031M)	M496-NSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 1N.
(E3032K)	M496-NSFC AR11901-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 1N.
						YMRP 2.4000 1N.
						YMRP 0.0000 1N.
						ZMRP 0.0000 1N.
						SCALE 0.0025

NACH 3.480

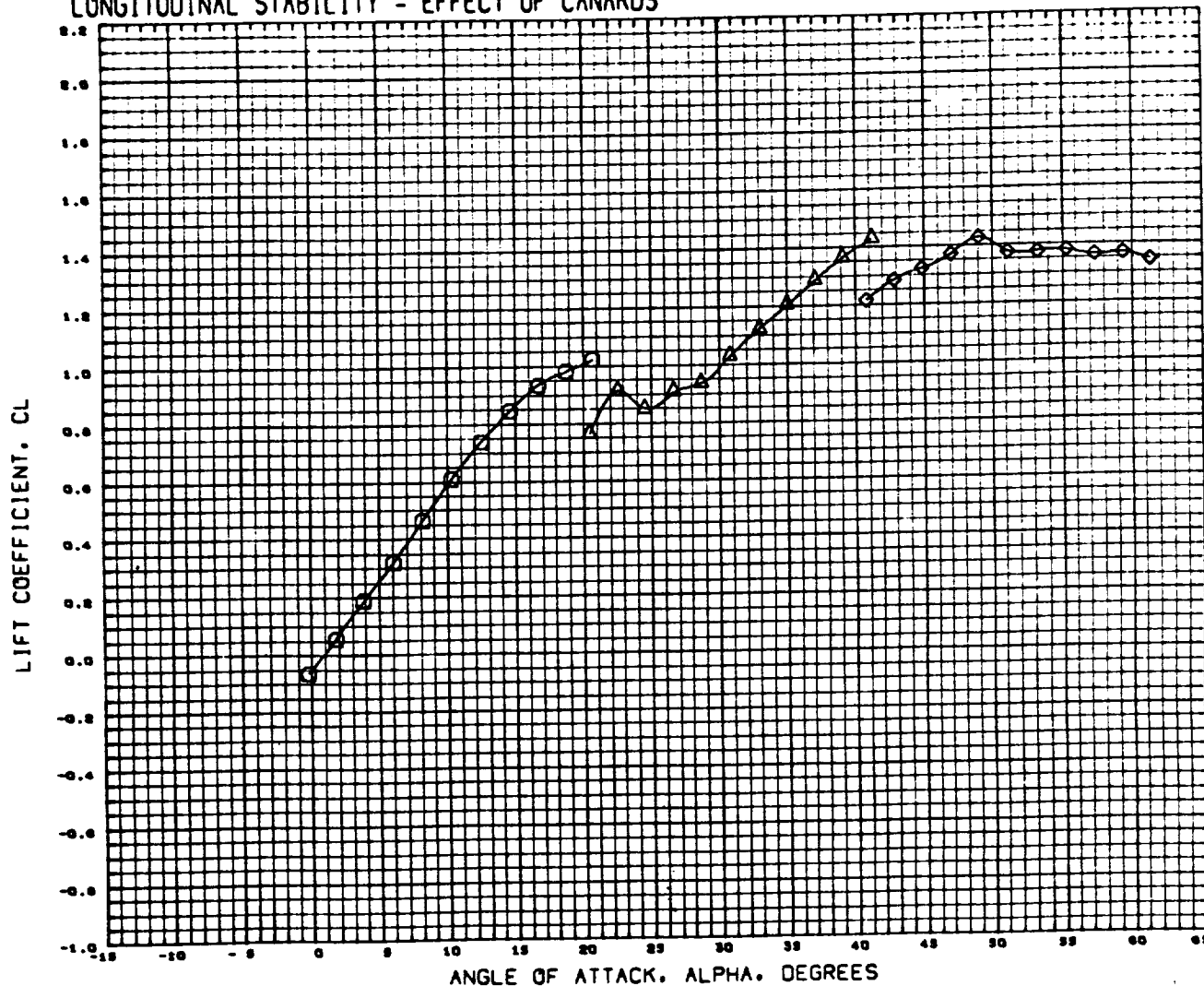
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3831M)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.9980 IN.
(E3832K)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						YMRP 2.4000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 4.959

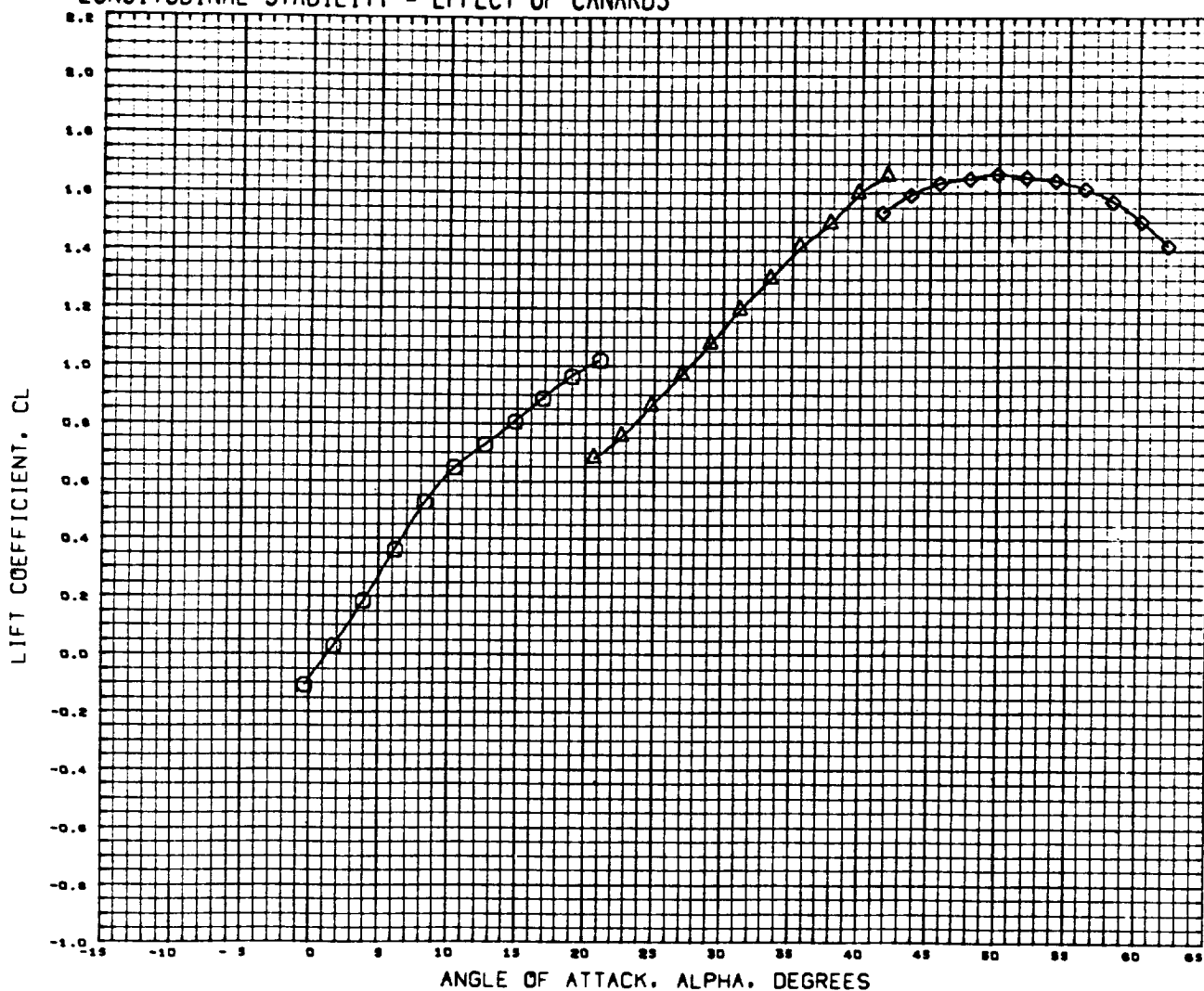
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3629A)	M496-MSFC AR11961-3 MODEL W48ZC12V2	0.000	0.000	0.000	0.000	SREF 4.9327 33. IN.
(E3631M)	M496-MSFC AR11961-3 MODEL W48ZC12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3632K)	M496-MSFC AR11961-3 MODEL W48ZC12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.599

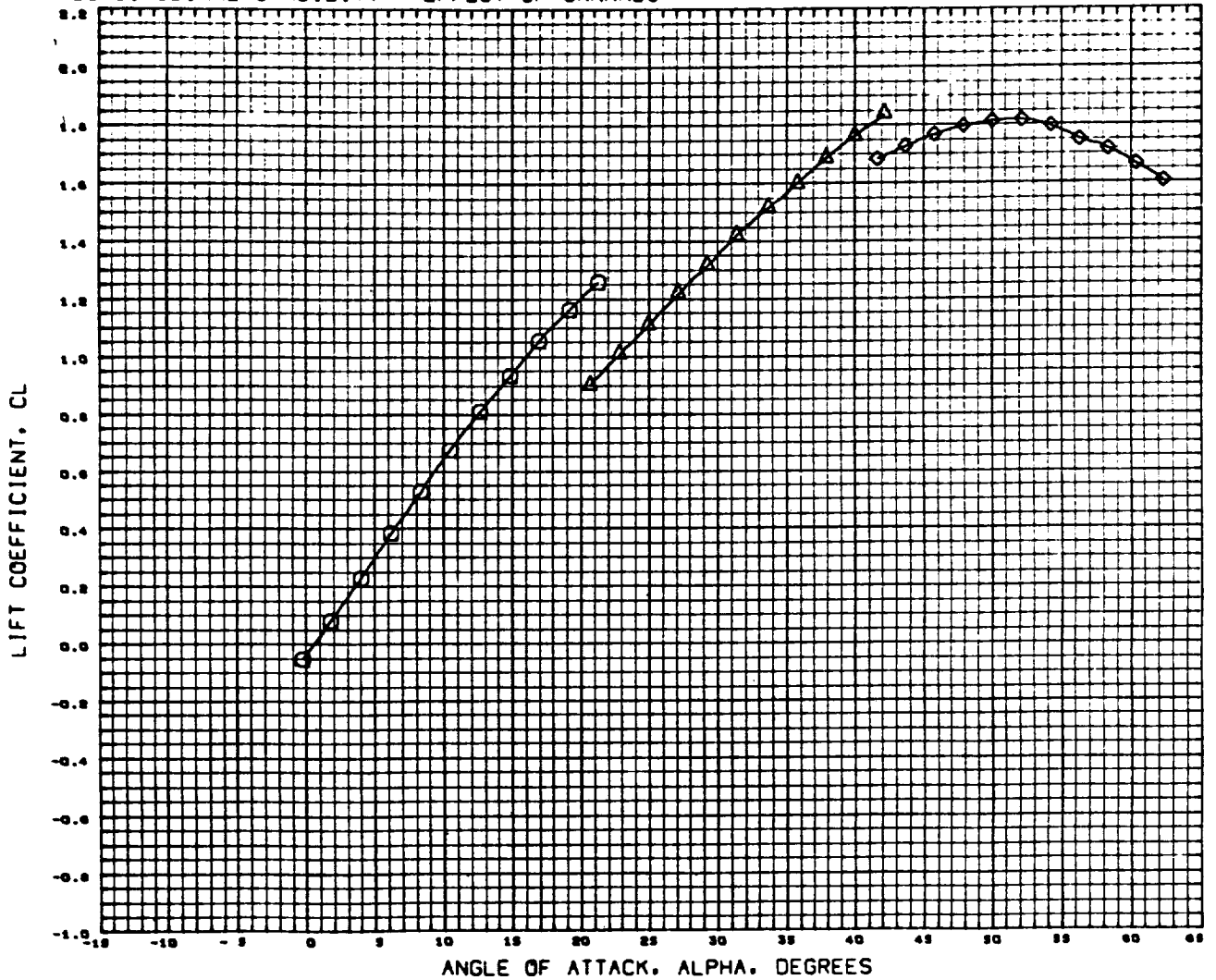
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-MSFC ARI1981-3 MOEEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3831M)	M496-MSFC ARI1981-3 MOEEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3832K)	M496-MSFC ARI1981-3 MOEEL W4B2C12V2	0.000	0.000	0.000	-80.000	SREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.905

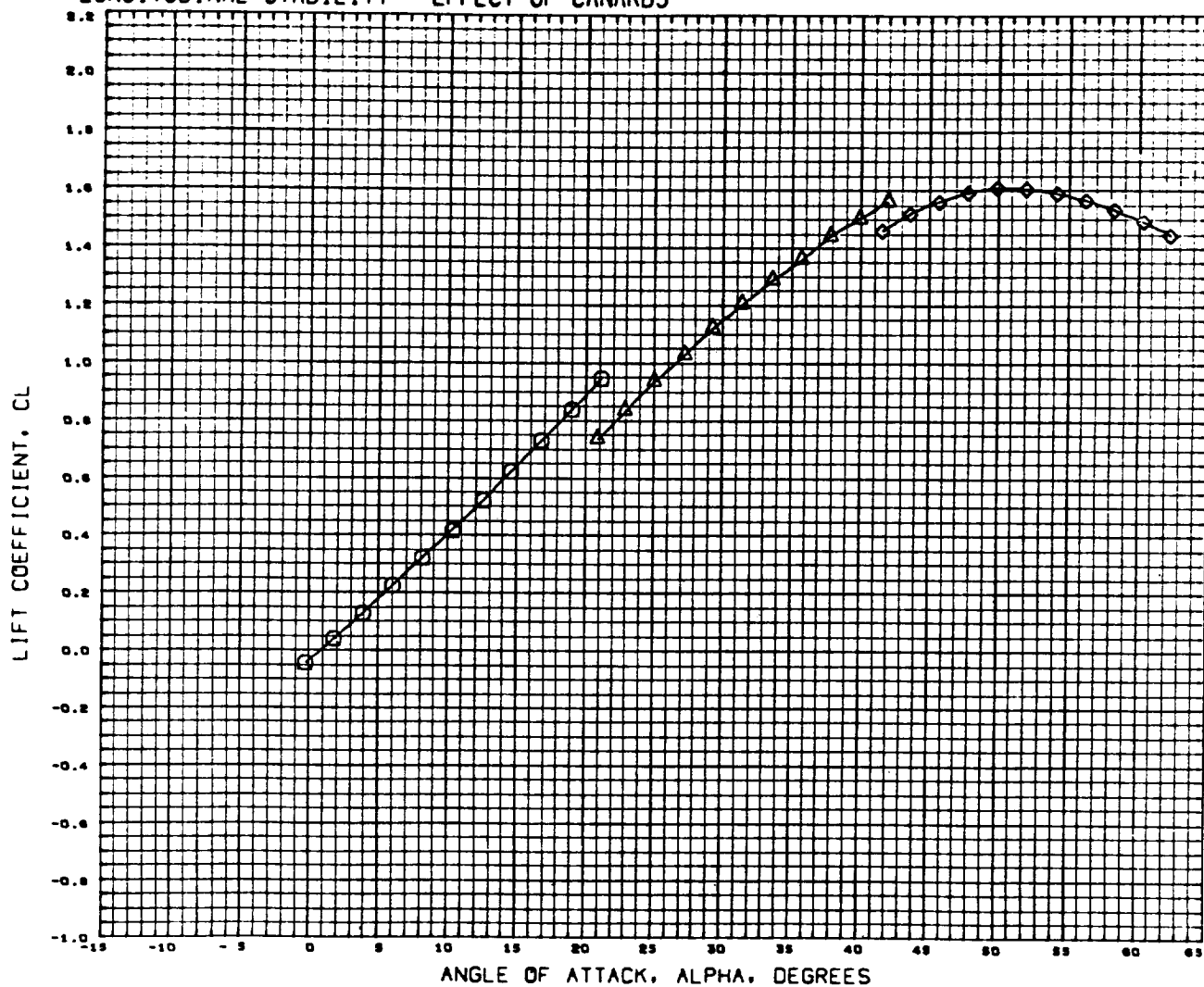
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION
(E3629A)	M496-M5FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30.IN.
(E3631H)	M496-M5FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3632K)	M496-M5FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023

MACH 1.197

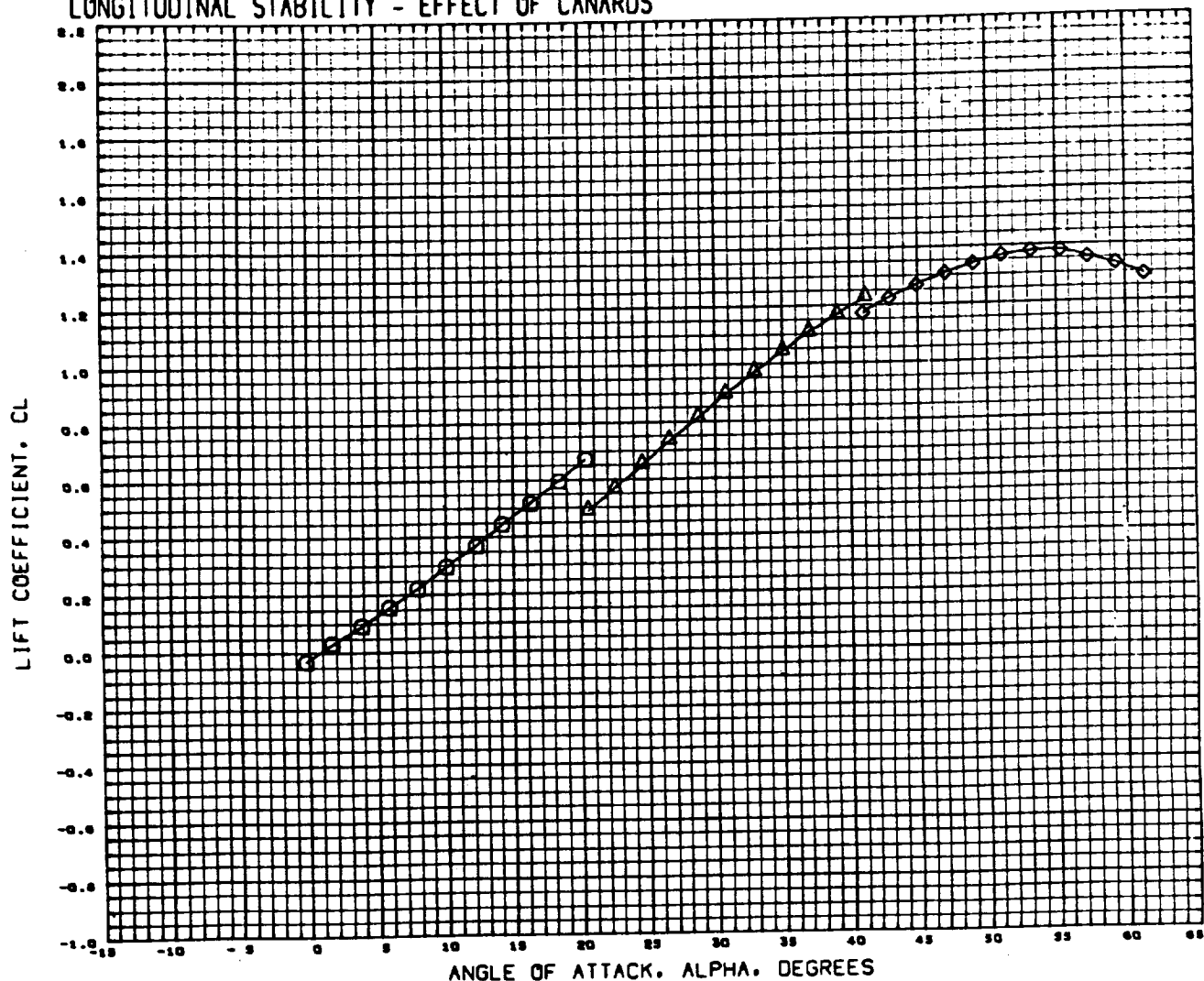
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031H)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.0960 IN.
(E3032K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.963

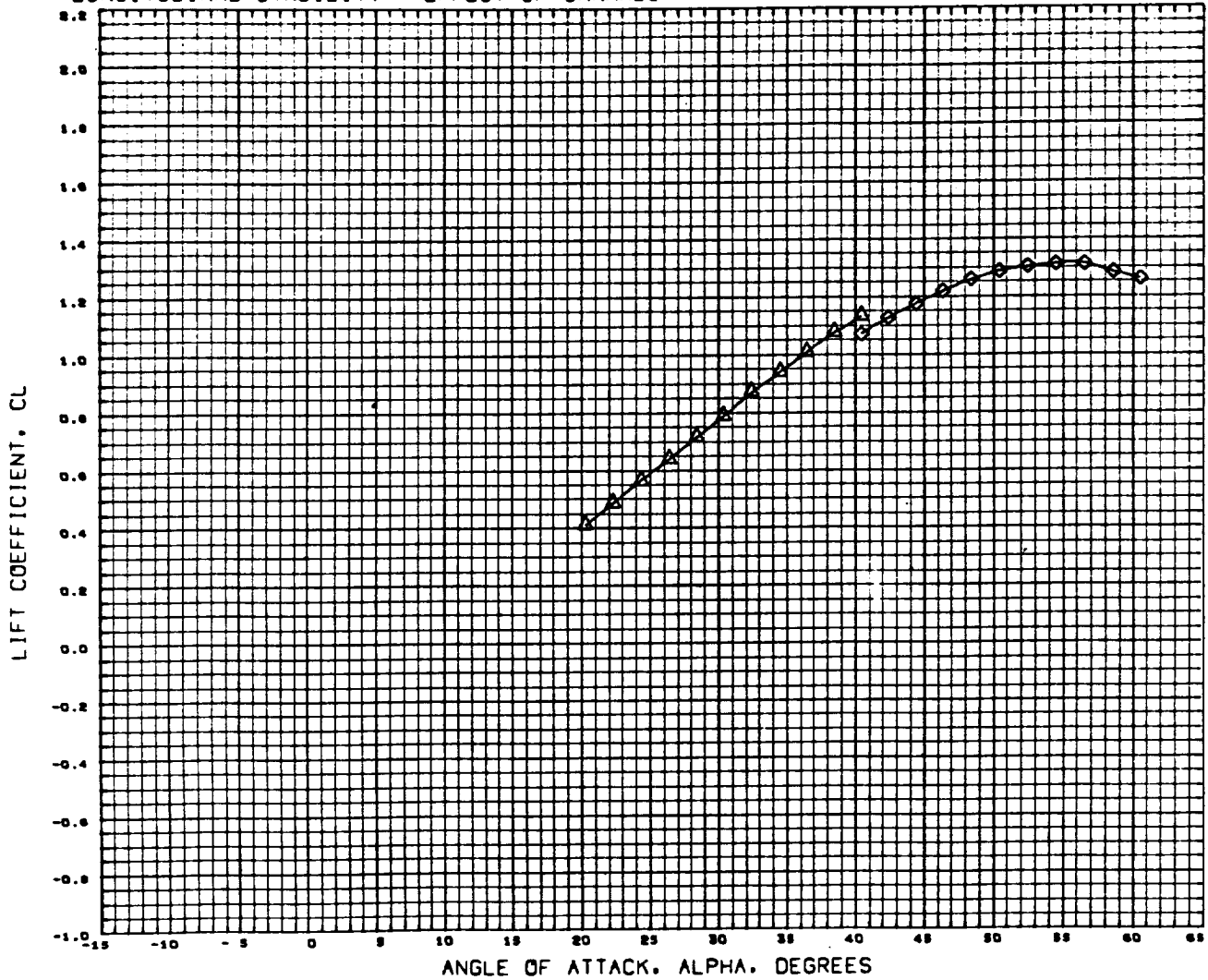
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M498-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3831M)	M498-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8940 IN.
(E3832K)	M498-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023

MACH 3.480

LONGITUDINAL STABILITY - EFFECT OF CANARDS

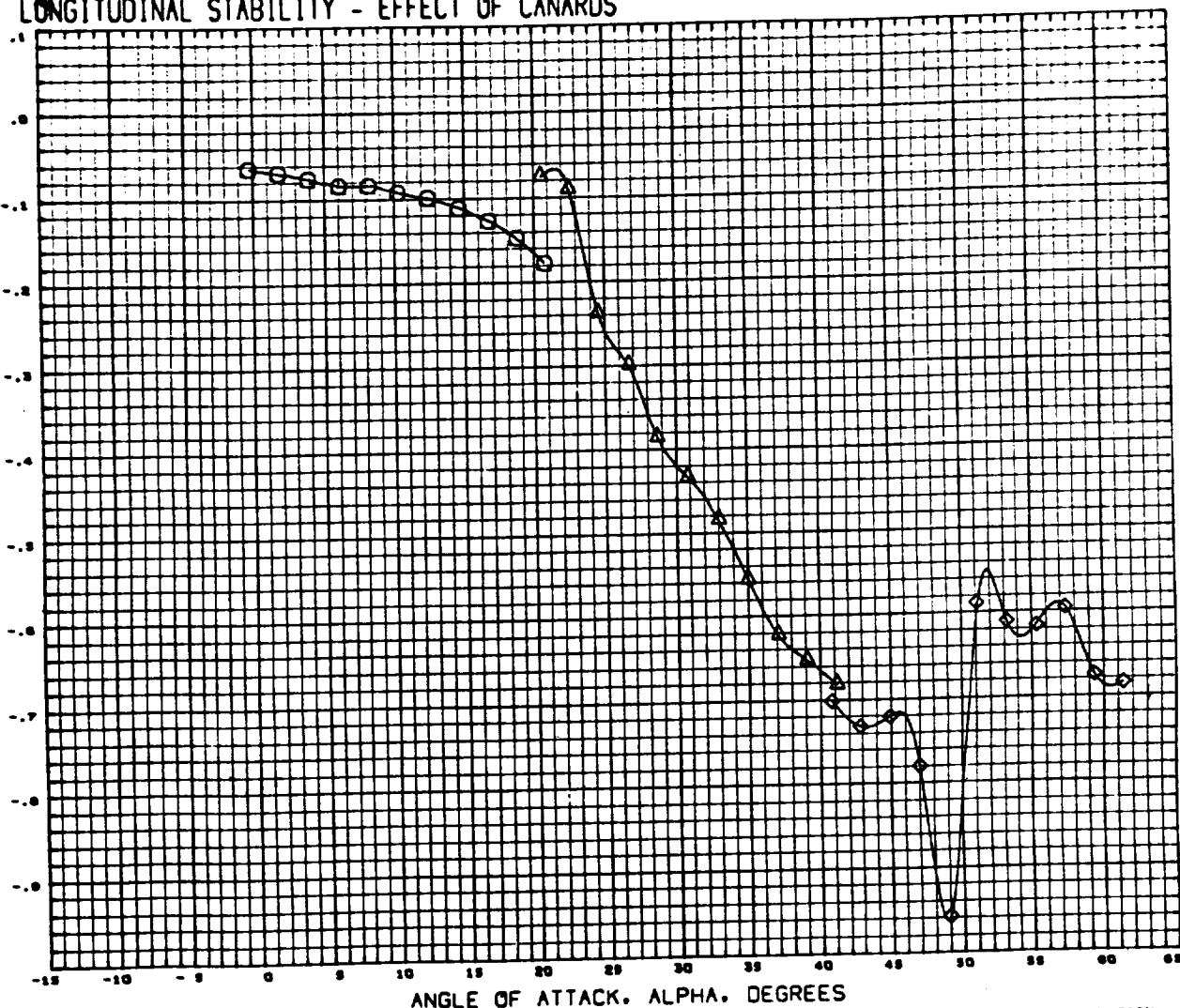


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
(E3829A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF	4.9327 SQ. IN.
(E3831M)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF	1.8980 IN.
(E3832K)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF	3.7200 IN.
						WMRP	2.4000 IN.
						YNRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 4.959

LONGITUDINAL STABILITY - EFFECT OF CANARDS

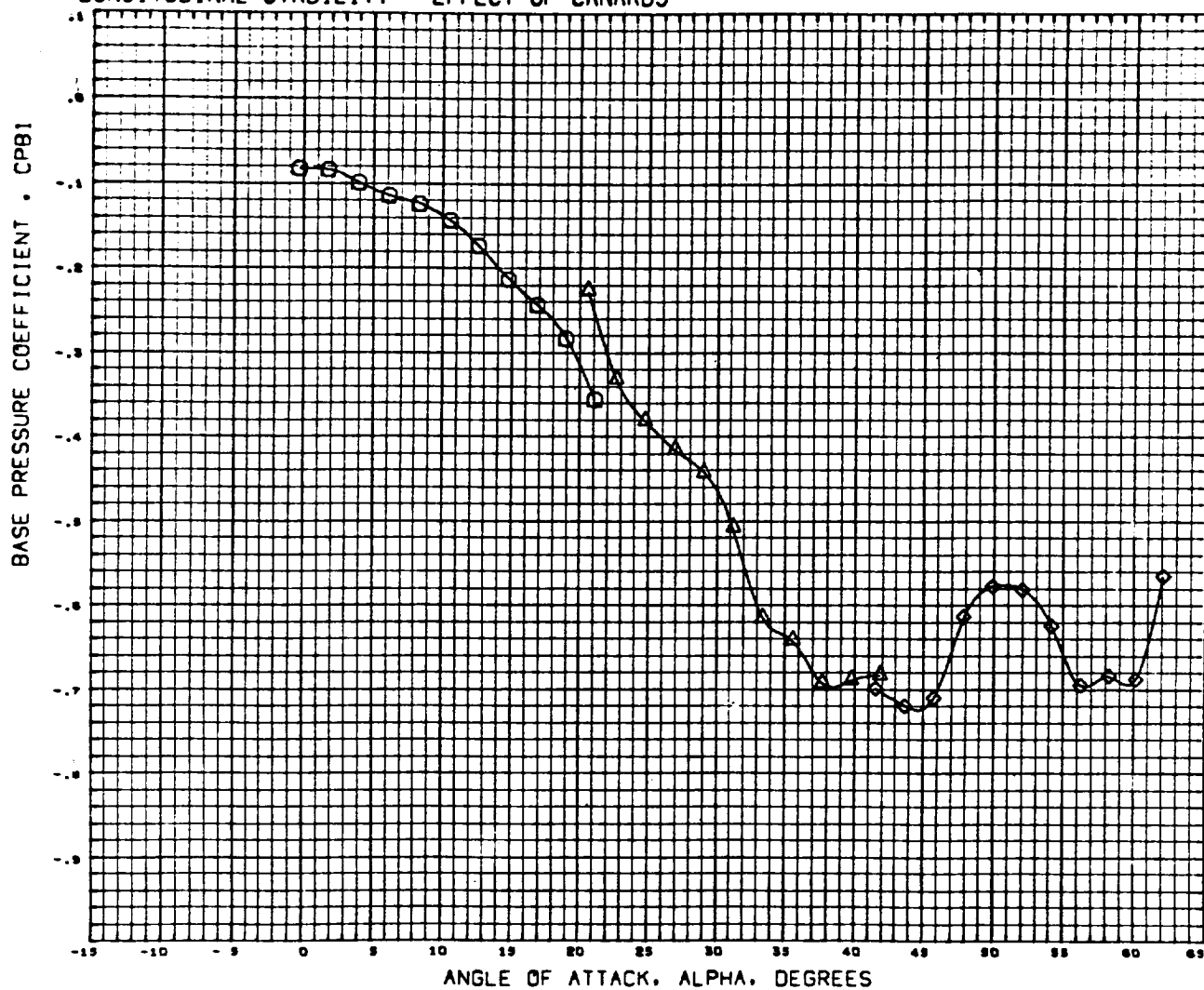
BASE PRESSURE COEFFICIENT, CPB1



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031M)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3032K)	M496-M3FC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
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						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

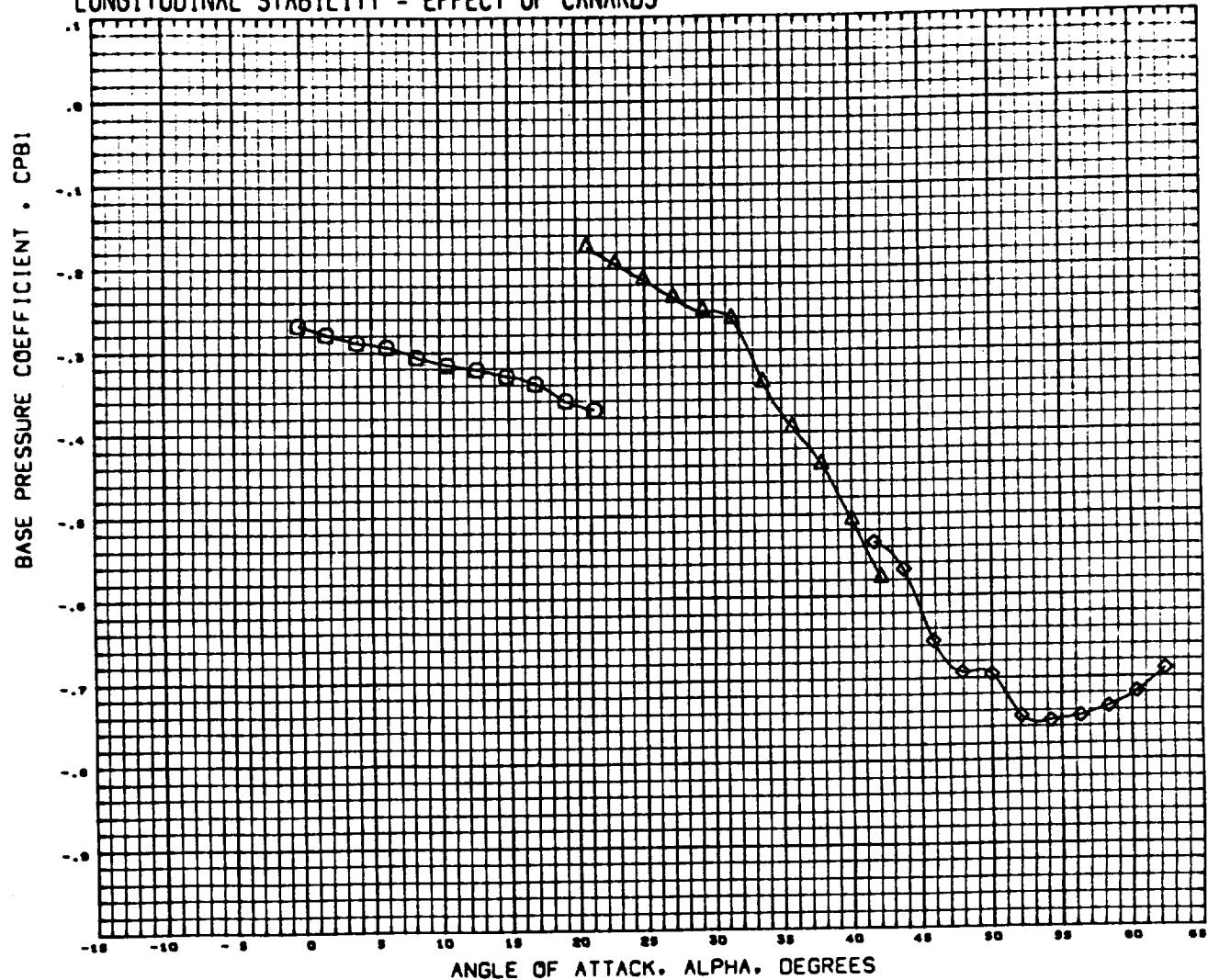
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-MSFC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	BREF 4.9327 50. IN.
(E3031M)	M496-MSFC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.6960 IN.
(E3032K)	M496-MSFC AR1198I-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.905

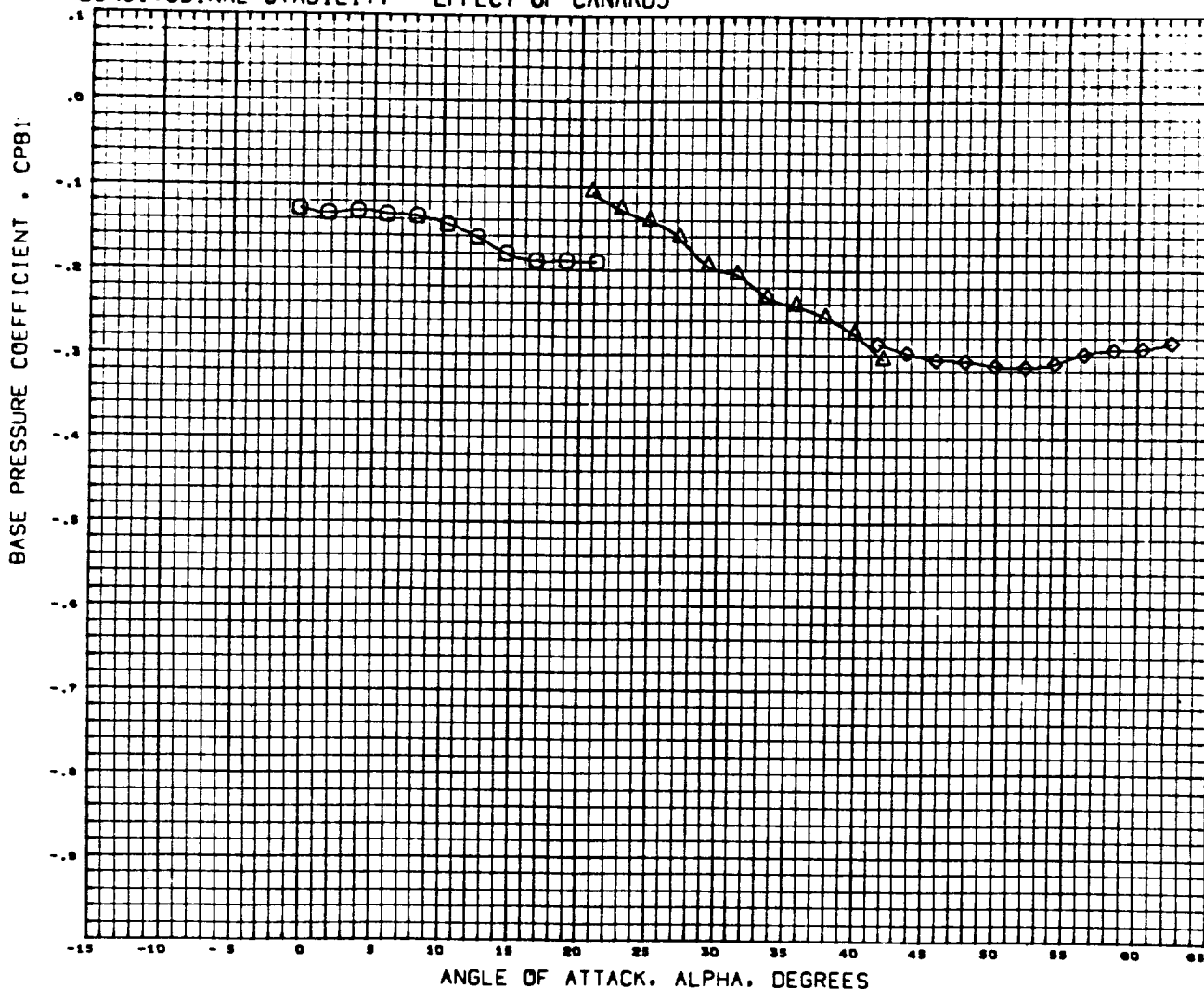
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-HSPC AR11981-3 MODEL WMB2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031M)	M496-HSPC AR11981-3 MODEL WMB2C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3032K)	M496-HSPC AR11981-3 MODEL WMB2C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 1.197

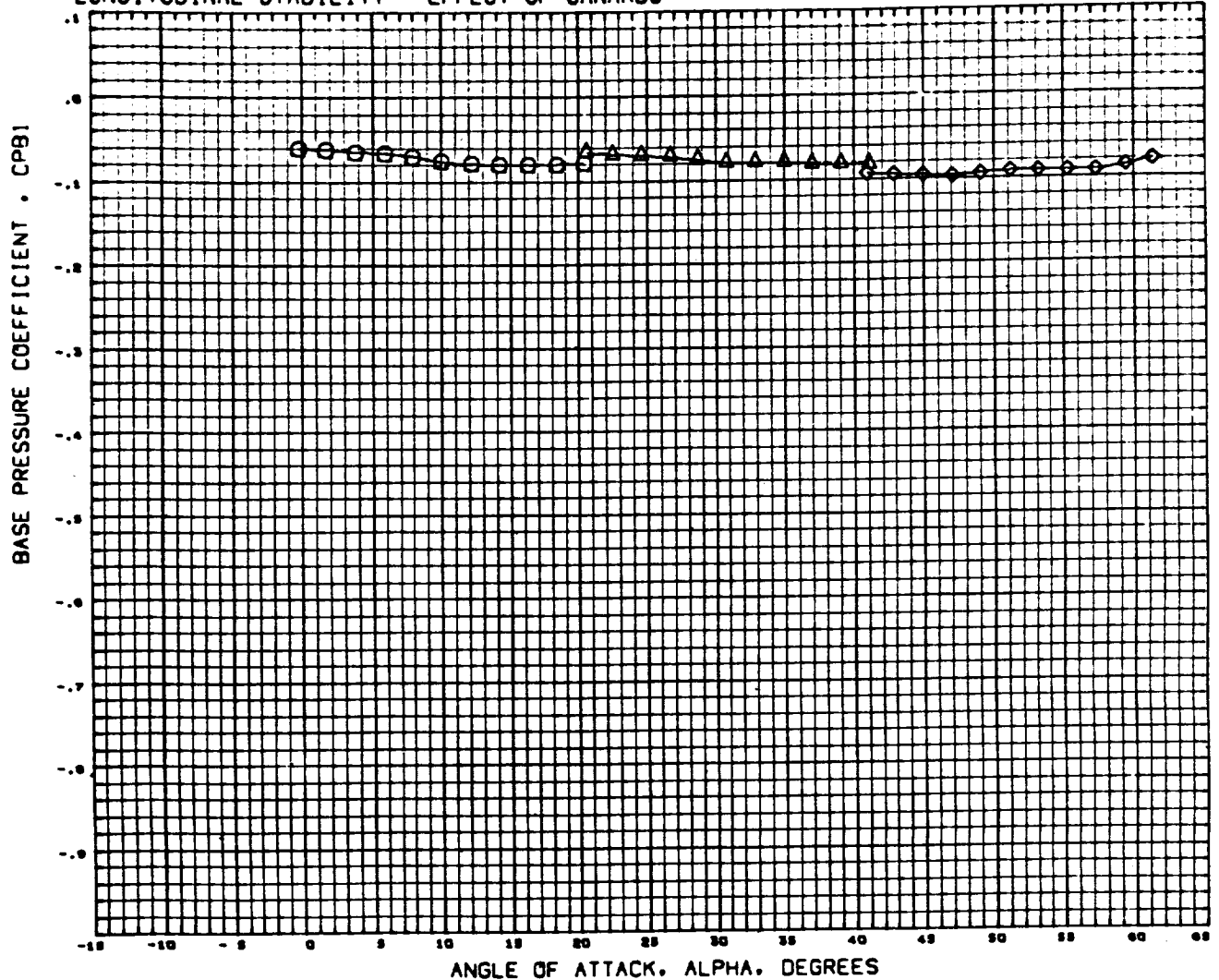
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	○	N496-MSFC	AR11961-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3831M)	△	N496-MSFC	AR11961-3 MODEL	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3832K)	◇	N496-MSFC	AR11961-3 MODEL	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
								KNRP 2.4000 IN.
								YHRP 0.0000 IN.
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								SCALE 0.0025

MACH 1.963

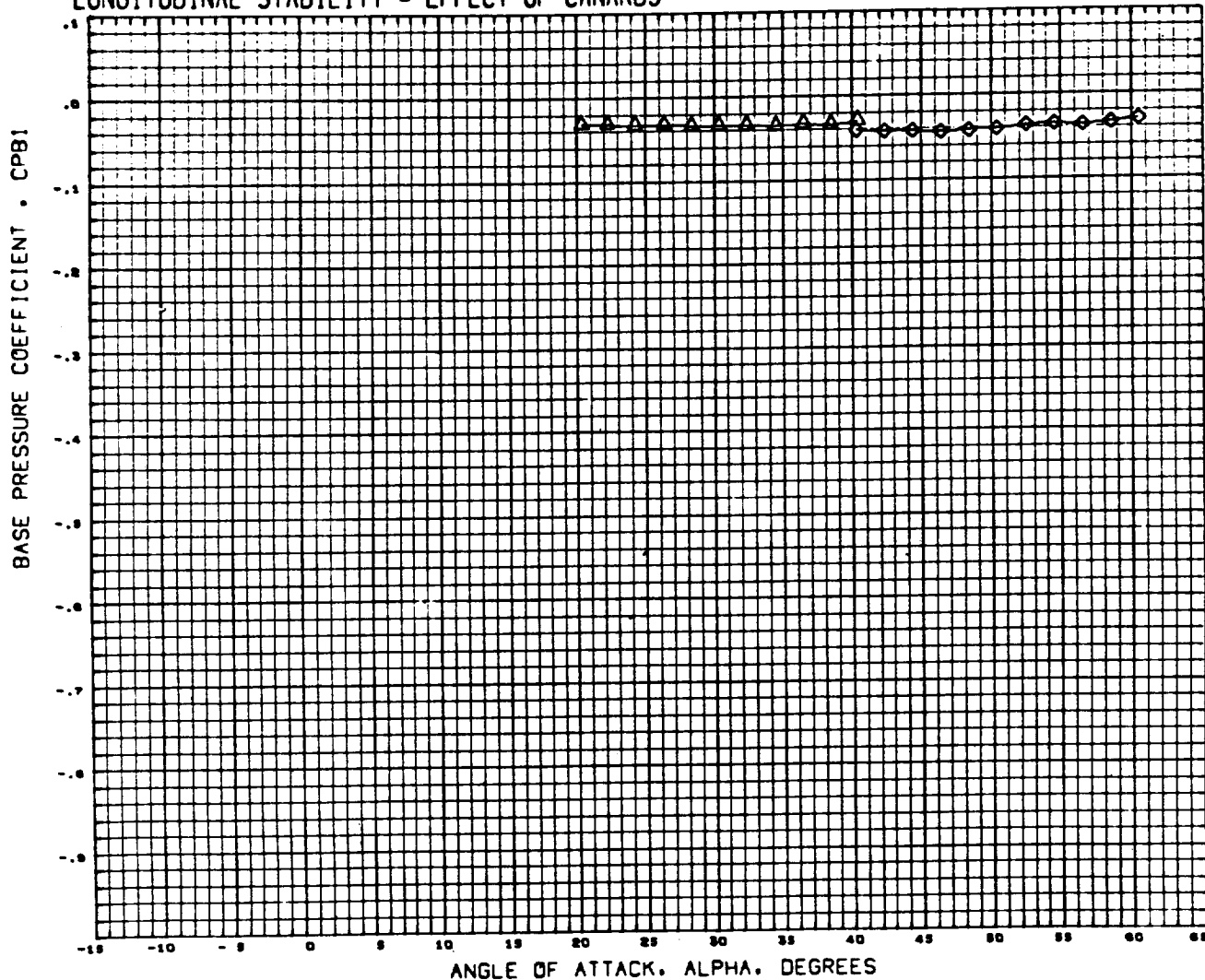
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-NSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031N)	M496-NSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3032R)	M496-NSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.400

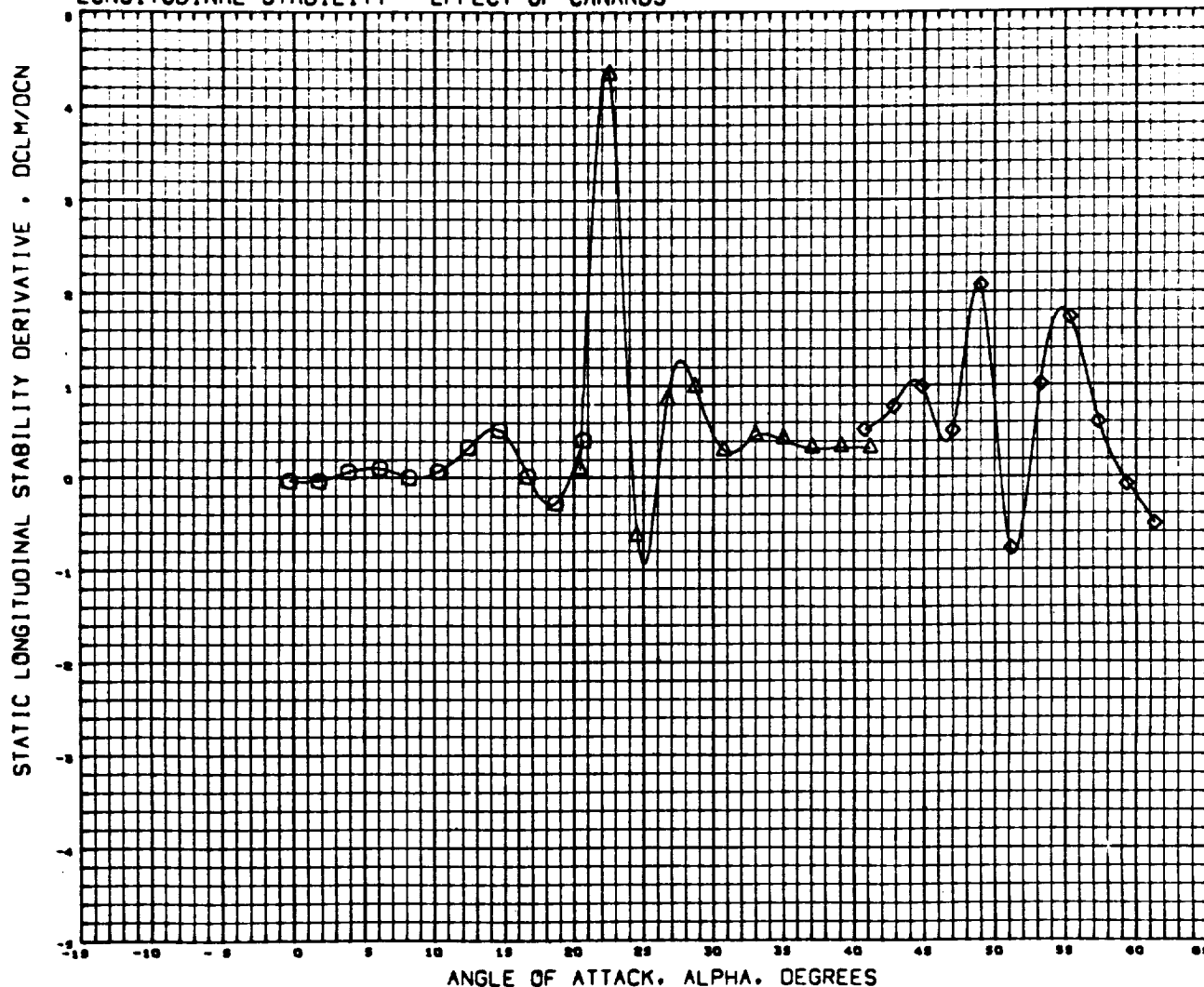
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3831H)	M496-MSFC AR11981-3 MODEL M482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3832K)	M496-MSFC AR11981-3 MODEL M482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 4.939

LONGITUDINAL STABILITY - EFFECT OF CANARDS

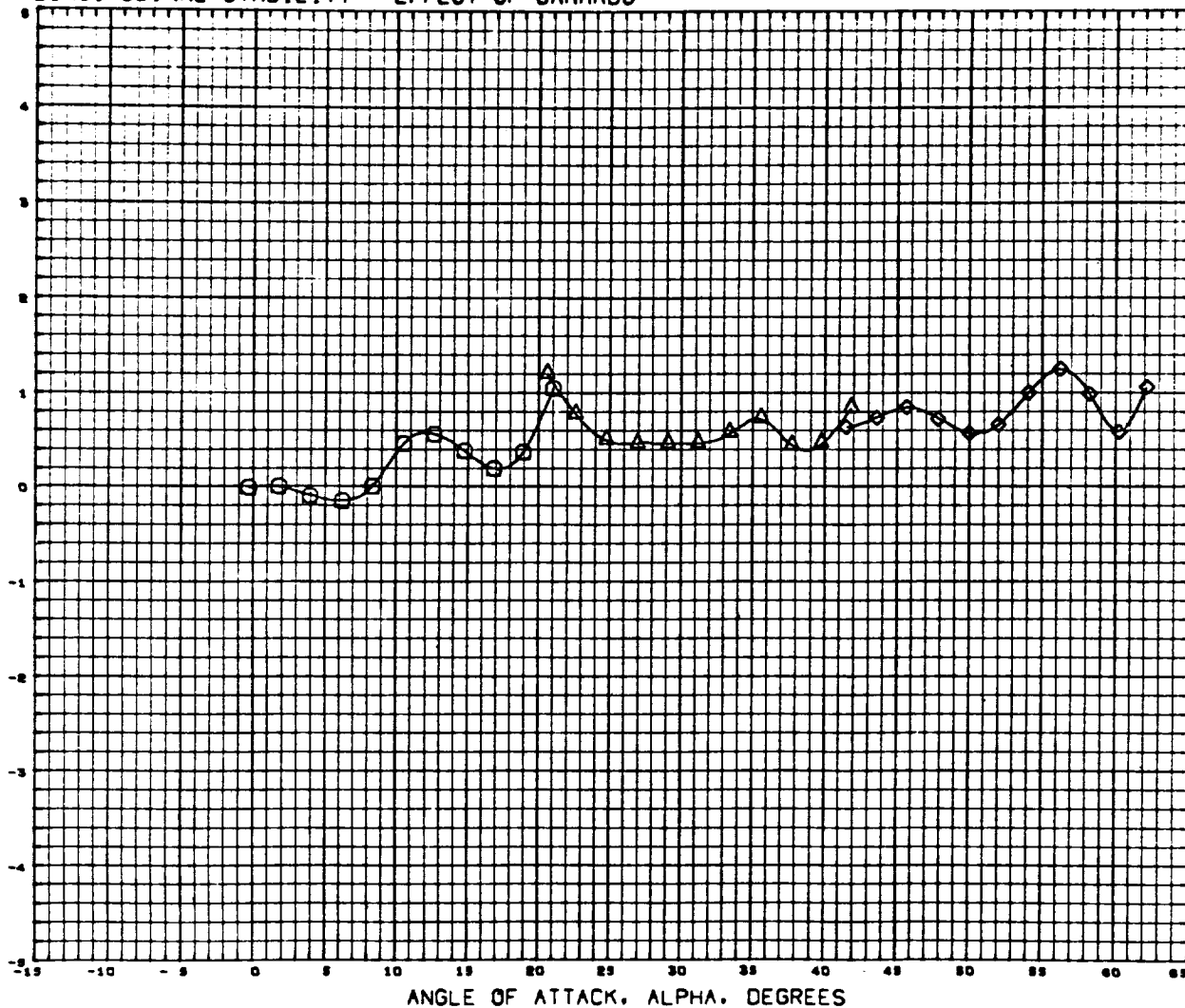


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3429A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 30. IN.
(E3431M)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3432K)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						ZHRP 2.4000 IN.
						YHRP 0.0000 IN.
						ZHRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

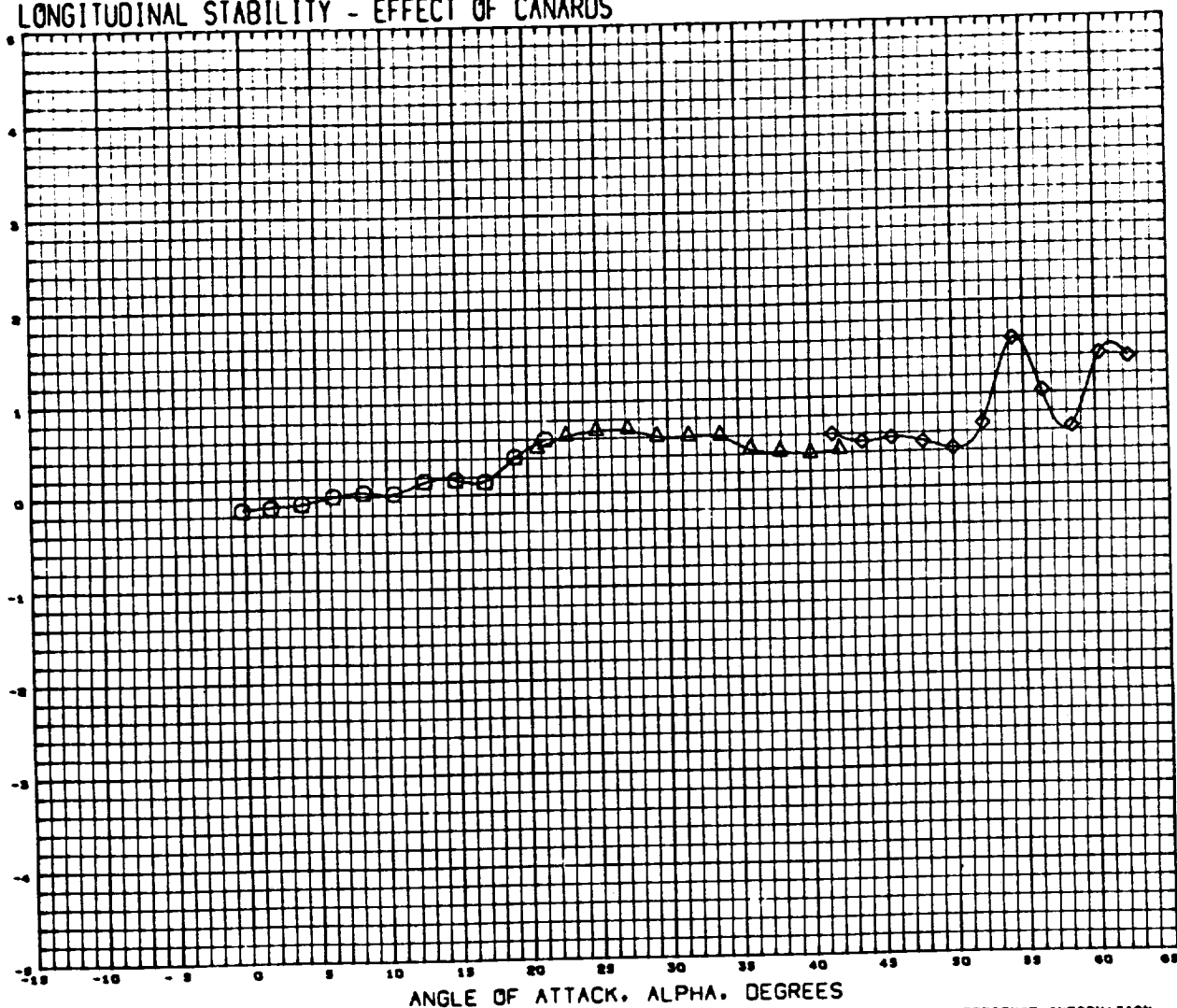


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3031H)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3032K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
						YWRP 2.4000 IN.
						YWRP 0.0000 IN.
						ZWRP 0.0000 IN.
						SCALE 0.0025

MACH 0.905

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

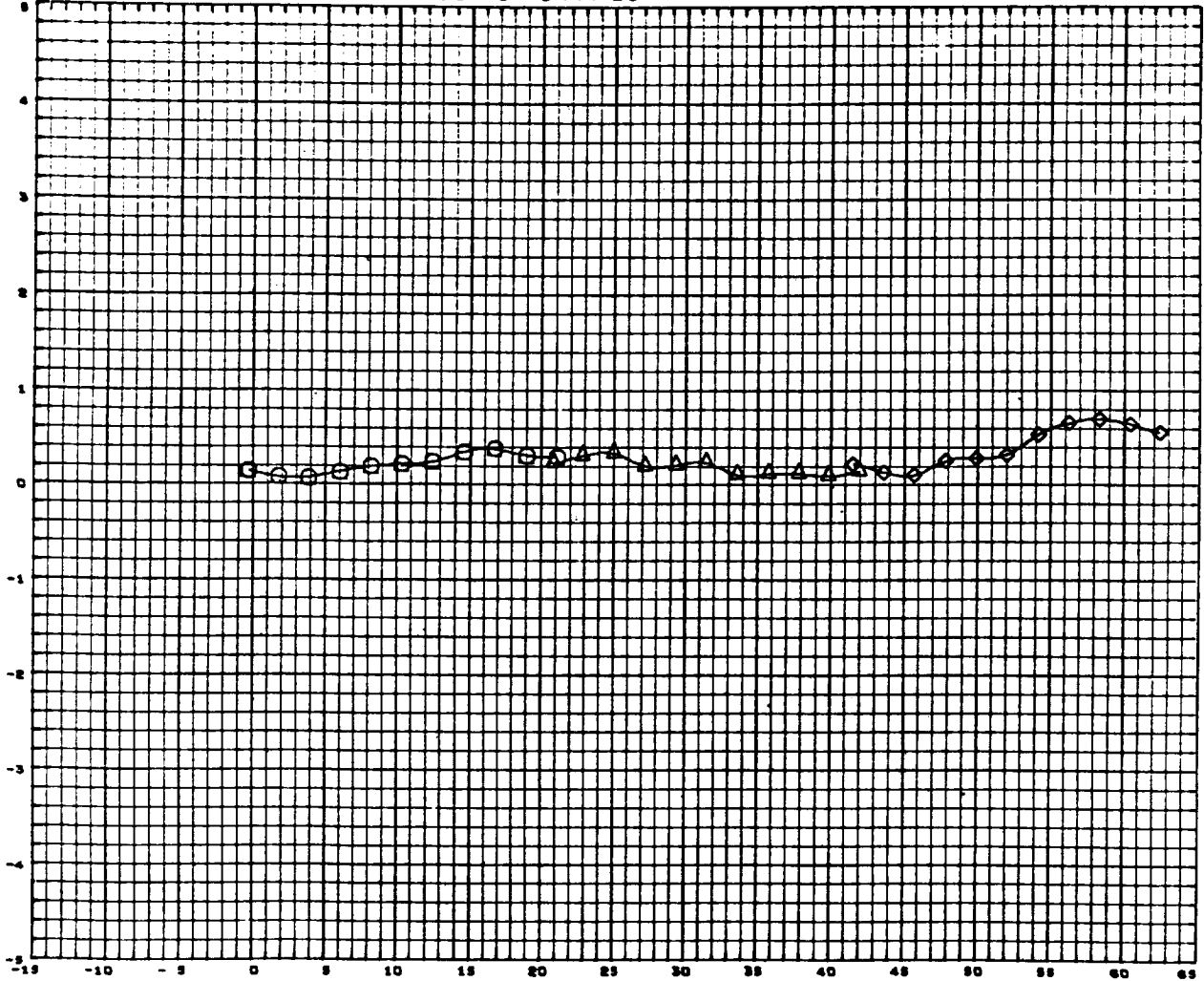


CONFIGURATION DESCRIPTION					BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION	
DATA SET SYMBOL										
(E3829A)	○	M496-HSFC	AR11901-3	MODEL	W48ZC12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3831M)	△	M496-HSFC	AR11901-3	MODEL	W48ZC12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3832K)	◇	M496-HSFC	AR11901-3	MODEL	W48ZC12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
										XMRP 2.4000 IN.
										YMRP 0.0000 IN.
										ZMRP 0.0000 IN.
										SCALE 0.0025

MACH 1.197

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN



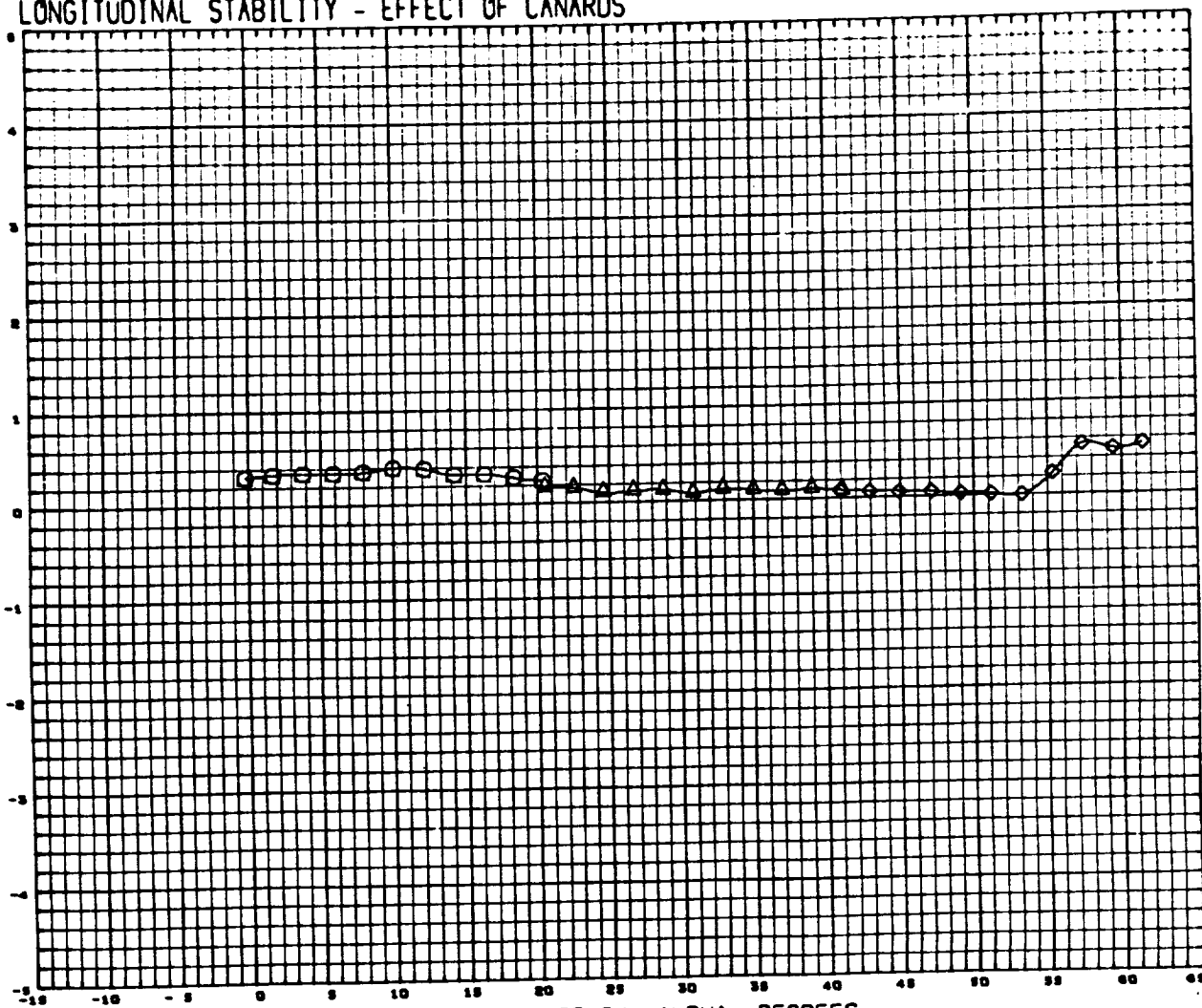
ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SRFP 4.9327 SQ. IN.
(E3831H)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LRFP 1.8980 IN.
(E3832K)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	SRFP 3.7200 IN.
						XRFP 2.4000 IN.
						YRFP 0.0000 IN.
						ZRFP 0.0000 IN.
						SCALE 0.0025

MACH 1.963

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

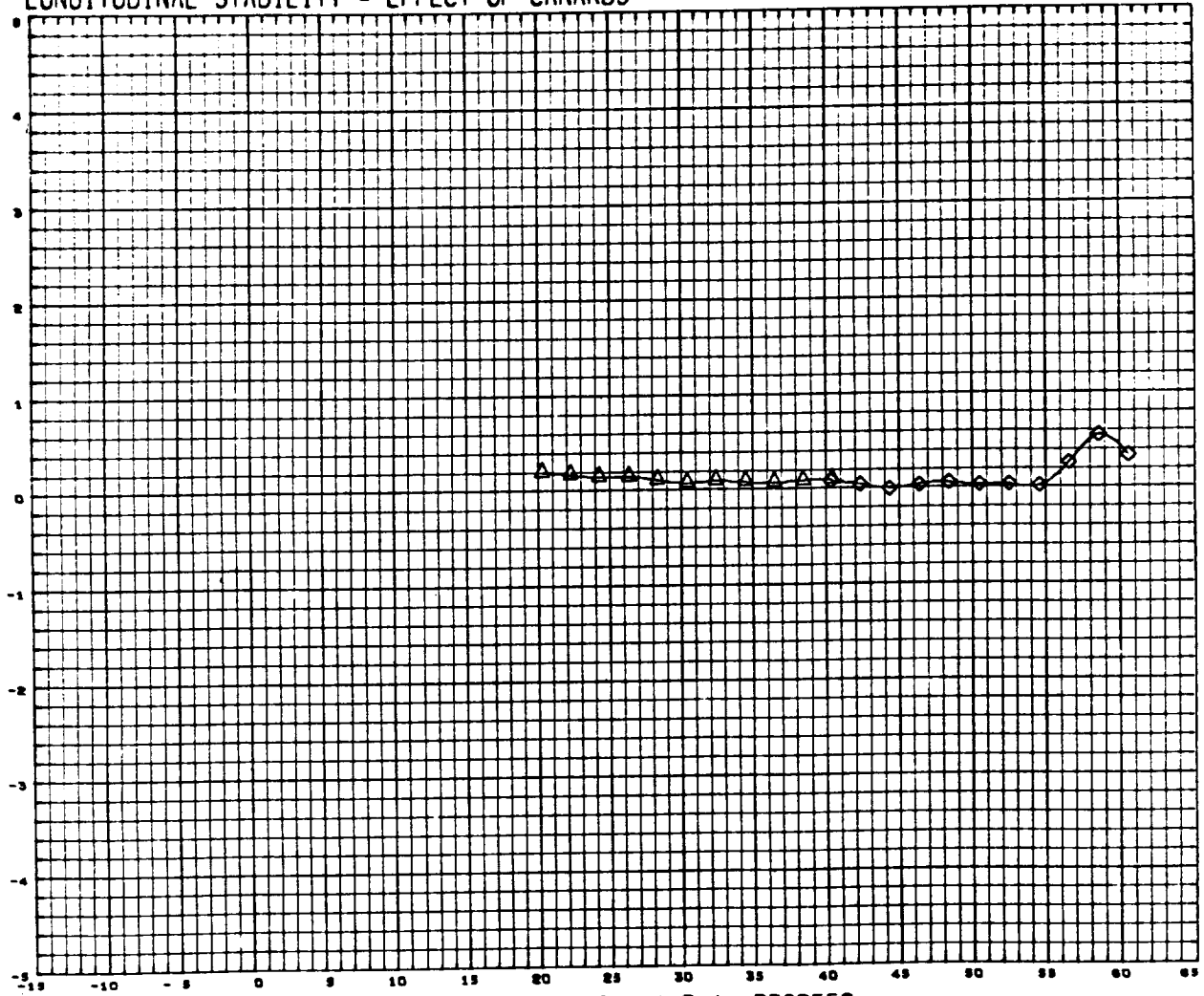


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	N498-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3831M)	N498-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8940 IN.
(E3832K)	N498-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						ZMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 3.480

LONGITUDINAL STABILITY - EFFECT OF CANARDS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/OCN



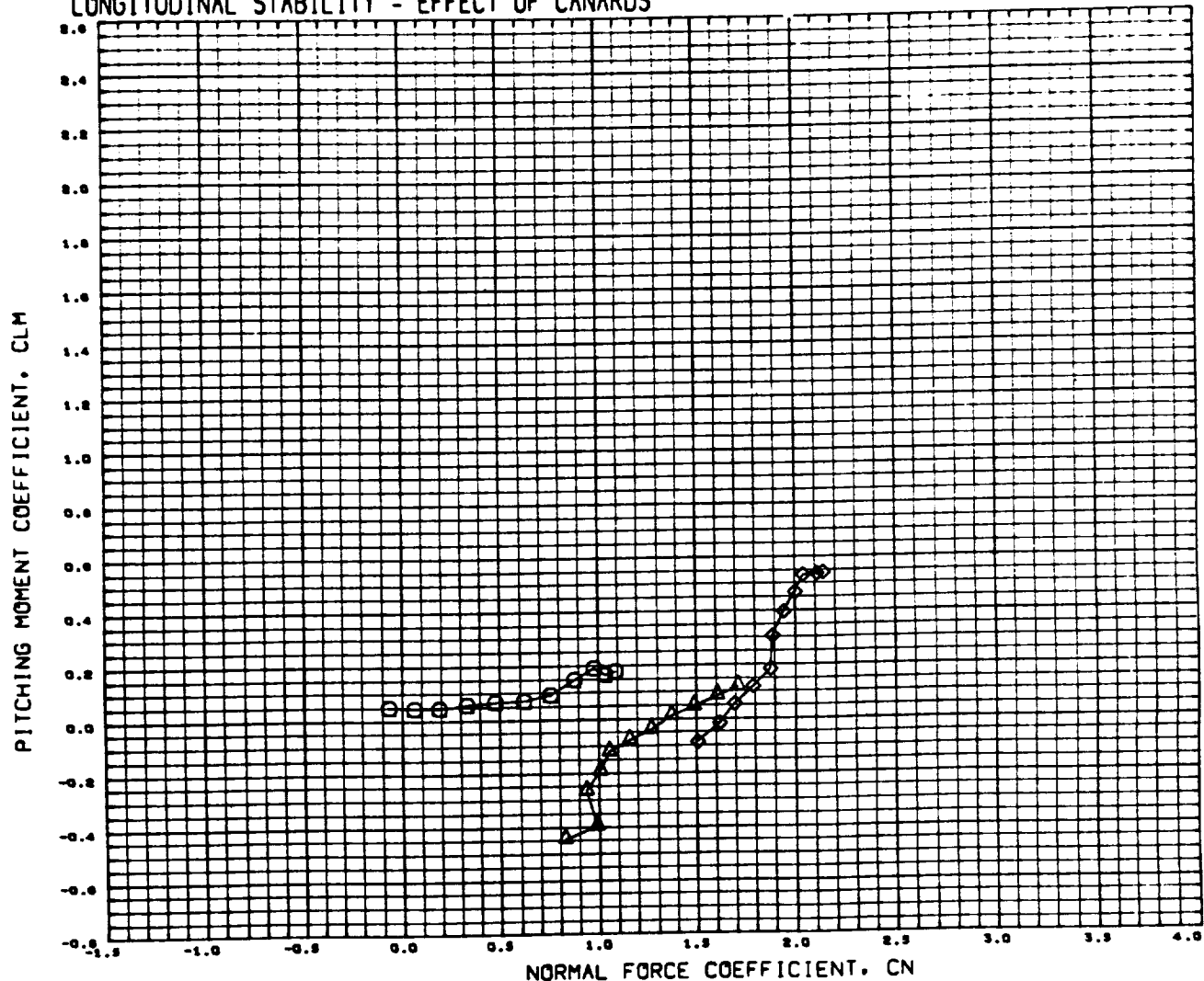
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(E3029A) DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3931M) M496-MSFC AR11981-3 MOEL W482C12V2
(E3A32K) M496-MSFC AR11981-3 MOEL W482C12V2

BETA	ELEVTR	AILRON	CANARD
0.000	0.000	0.000	0.000
0.000	0.000	0.000	-40.000
0.000	0.000	0.000	-60.000

REFERENCE INFORMATION	
SREF	4.9327 80. IN.
LREF	1.8980 IN.
QREF	3.7200 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH 4.959

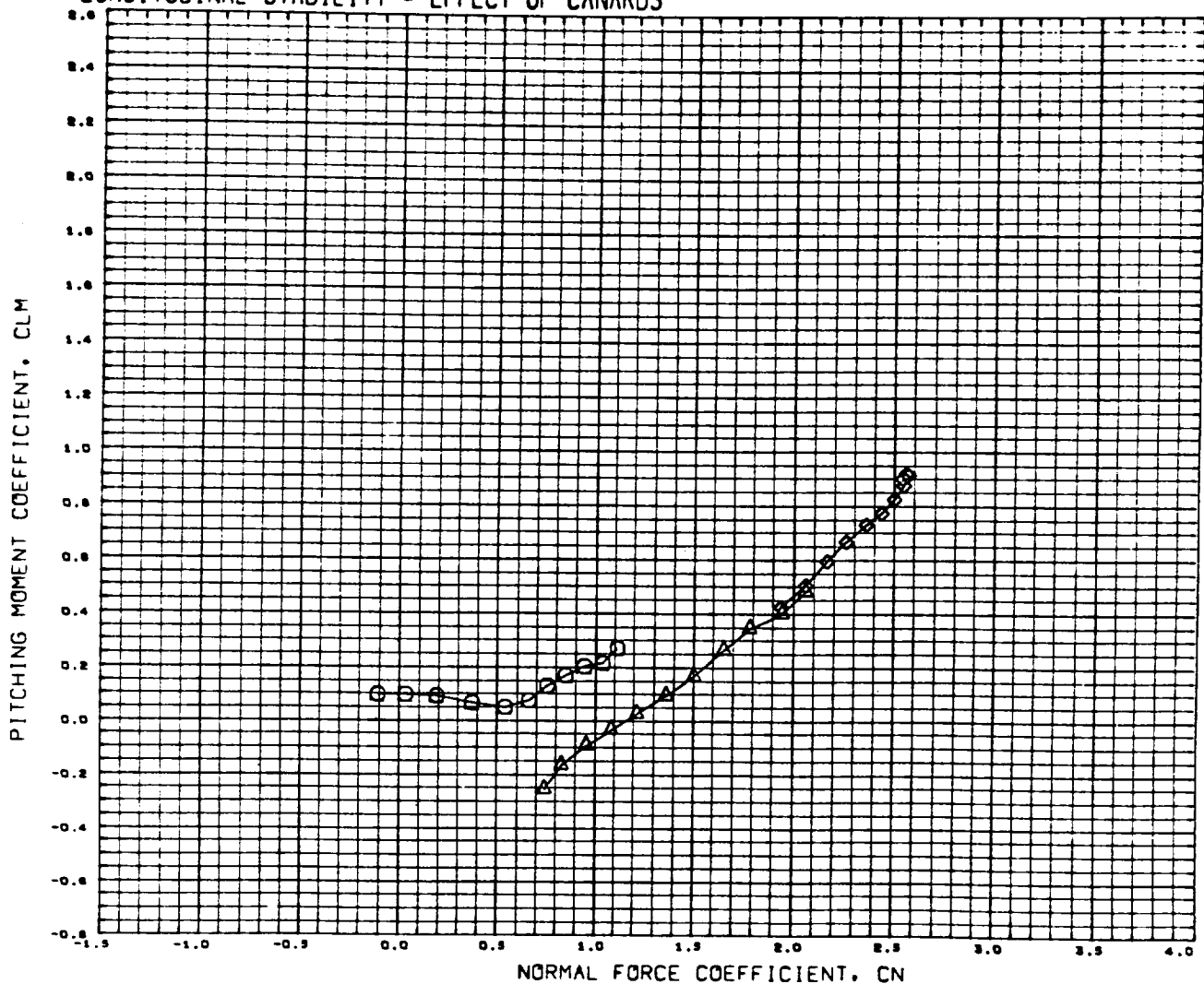
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3629A)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3631H)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3632K)	M496-MSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 0.999

LONGITUDINAL STABILITY - EFFECT OF CANARDS

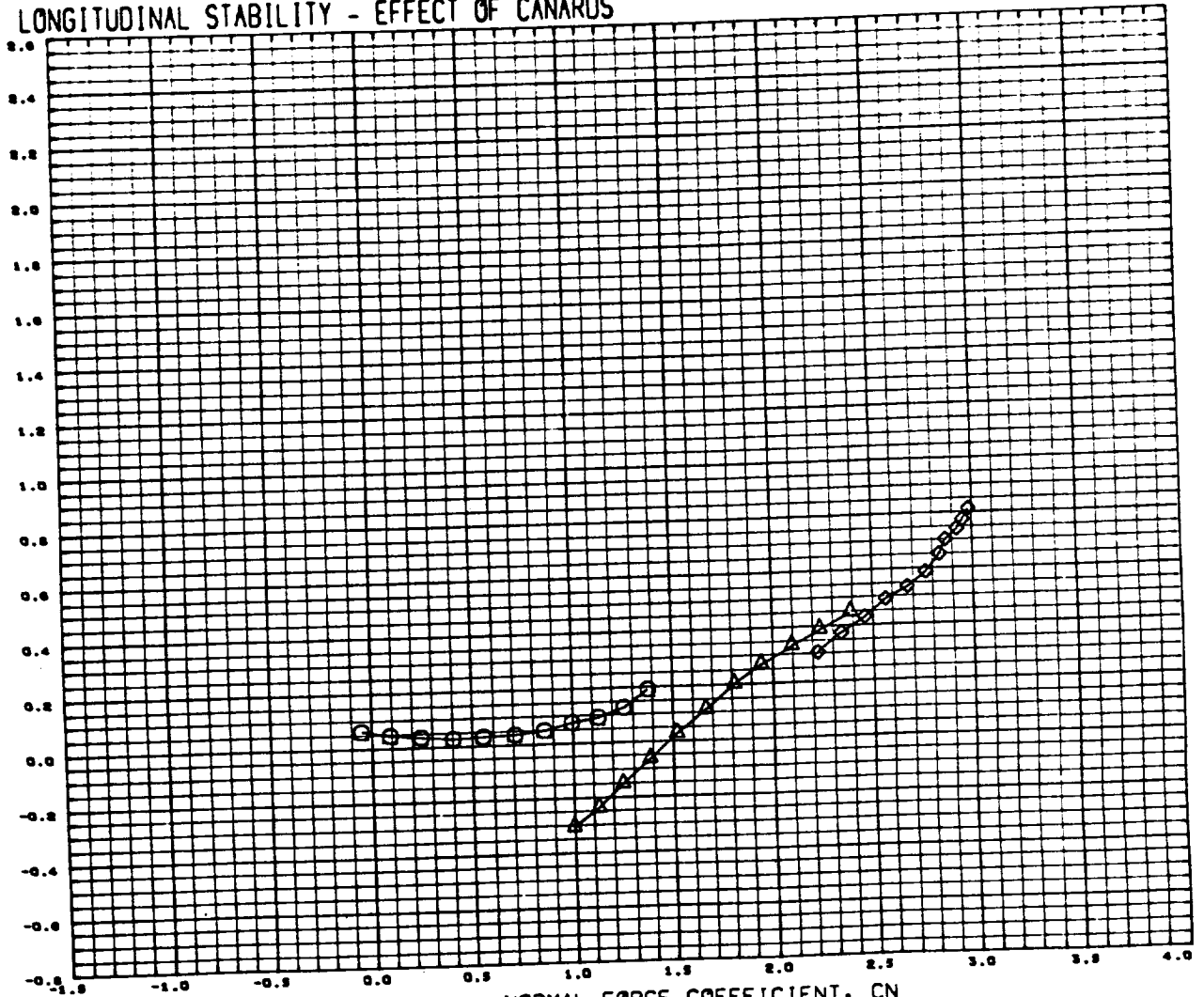


DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	ATLRON	CANARD	REFERENCE INFORMATION	
(E3829A)	○	M496-MSFC	AR11981-3 MODEL	W4B2C12V2	0.000	0.000	0.000	SREF	4.9327 30.1N.
(E3531M)	△	M496-MSFC	AR11981-3 MODEL	W4B2C12V2	0.000	0.000	0.000	LREF	1.8960 1N.
(E3832K)	◇	M496-MSFC	AR11981-3 MODEL	W4B2C12V2	0.000	0.000	0.000	BREF	3.7200 1N.
								XMRP	2.4000 1N.
								YMRP	0.0000 1N.
								ZMRP	0.0000 1N.
								SCALE	0.0025

MACH 0.905

LONGITUDINAL STABILITY - EFFECT OF CANARDS

PITCHING MOMENT COEFFICIENT, CLM



NORMAL FORCE COEFFICIENT, CN

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3629A)	M496-H3FC AR11981-3 MODEL W482C12V2
(E3631H)	M496-H3FC AR11981-3 MODEL W482C12V2
(E3632K)	M496-H3FC AR11981-3 MODEL W482C12V2

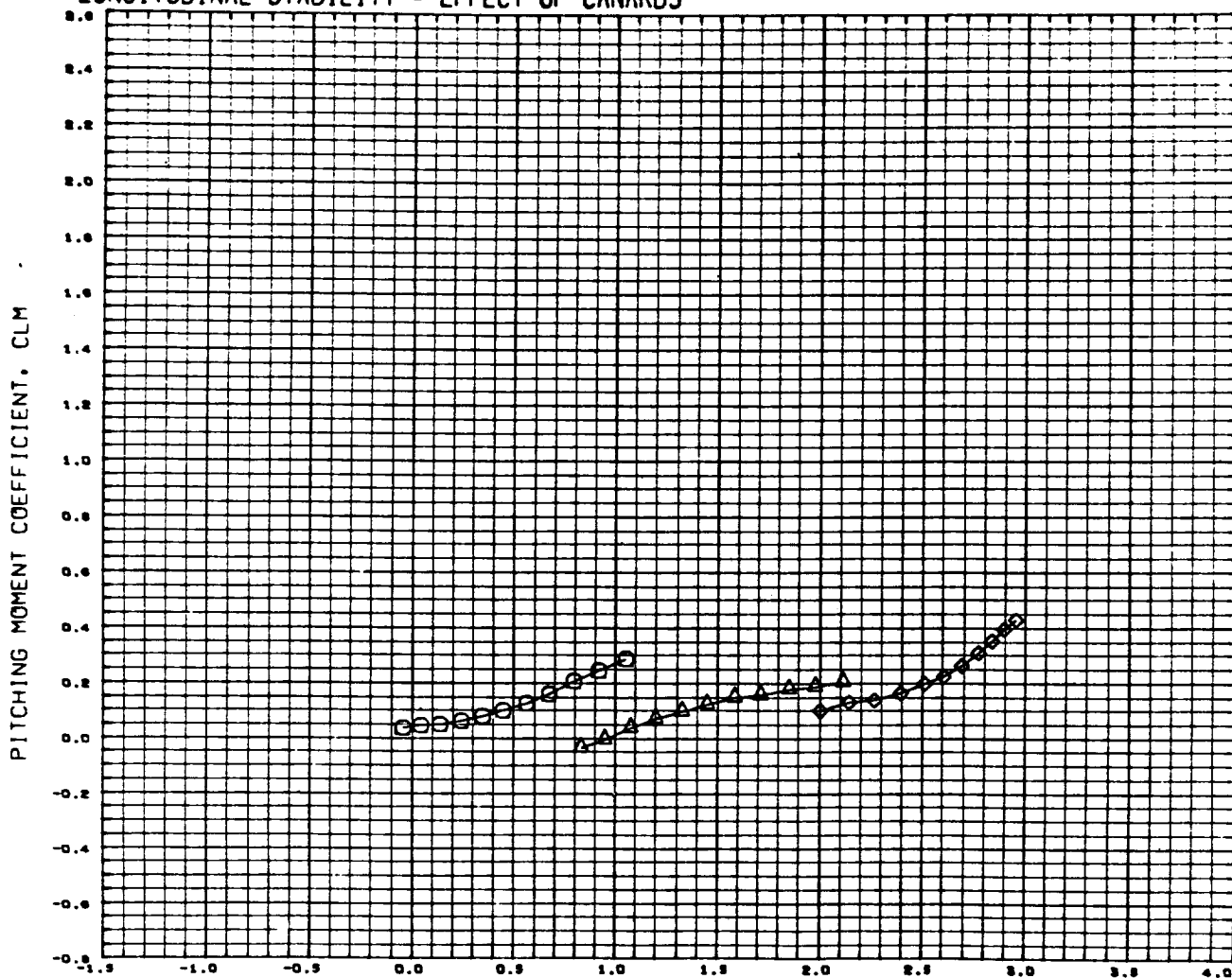
BETA	ELEVTR	AILRON	CANARD
0.000	0.000	0.000	0.000
0.000	0.000	0.000	-40.000
0.000	0.000	0.000	-60.000

REFERENCE INFORMATION	
SREF	4.9327 53.1N.
LREF	1.8950 1N.
BREF	3.7200 1N.
XMRP	2.4000 1N.
YMRP	0.0000 1N.
ZMRP	0.0000 1N.
SCALE	0.0025

MACH 1.197

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

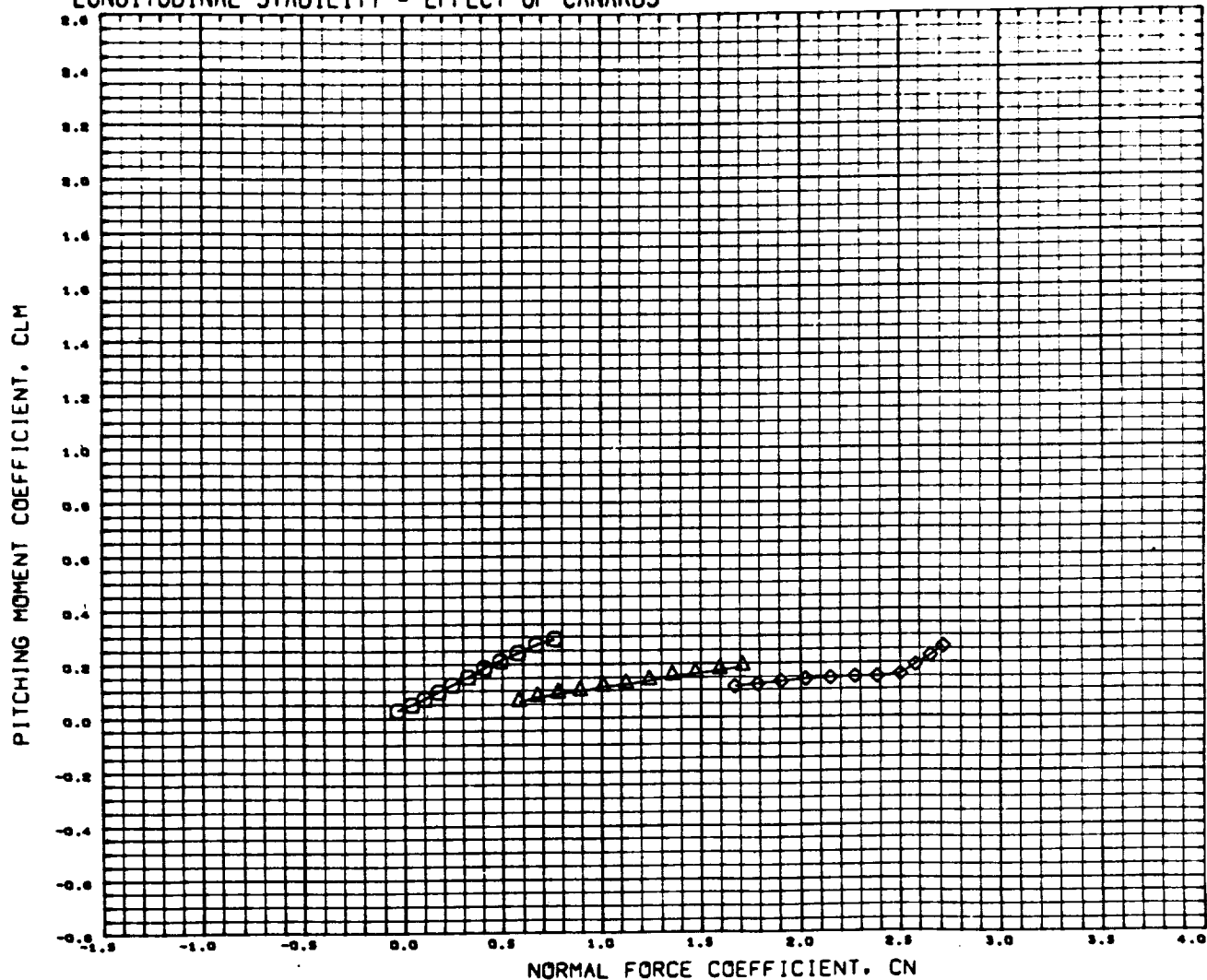


DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE	INFORMATION
(E3629A)	○	M496-MSFC	AR11981-3	MODEL	W4B2C12V2	0.000	0.000	0.000	0.000
(E3631M)	△	M496-MSFC	AR11981-3	MODEL	W4B2C12V2	0.000	0.000	0.000	-40.000
(E3632K)	◇	M496-MSFC	AR11991-3	MODEL	W4B2C12V2	0.000	0.000	0.000	-60.000

MACH	1.963
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SREF	4.9327	50.1N.
LREF	1.8980	IN.
BREF	3.7200	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

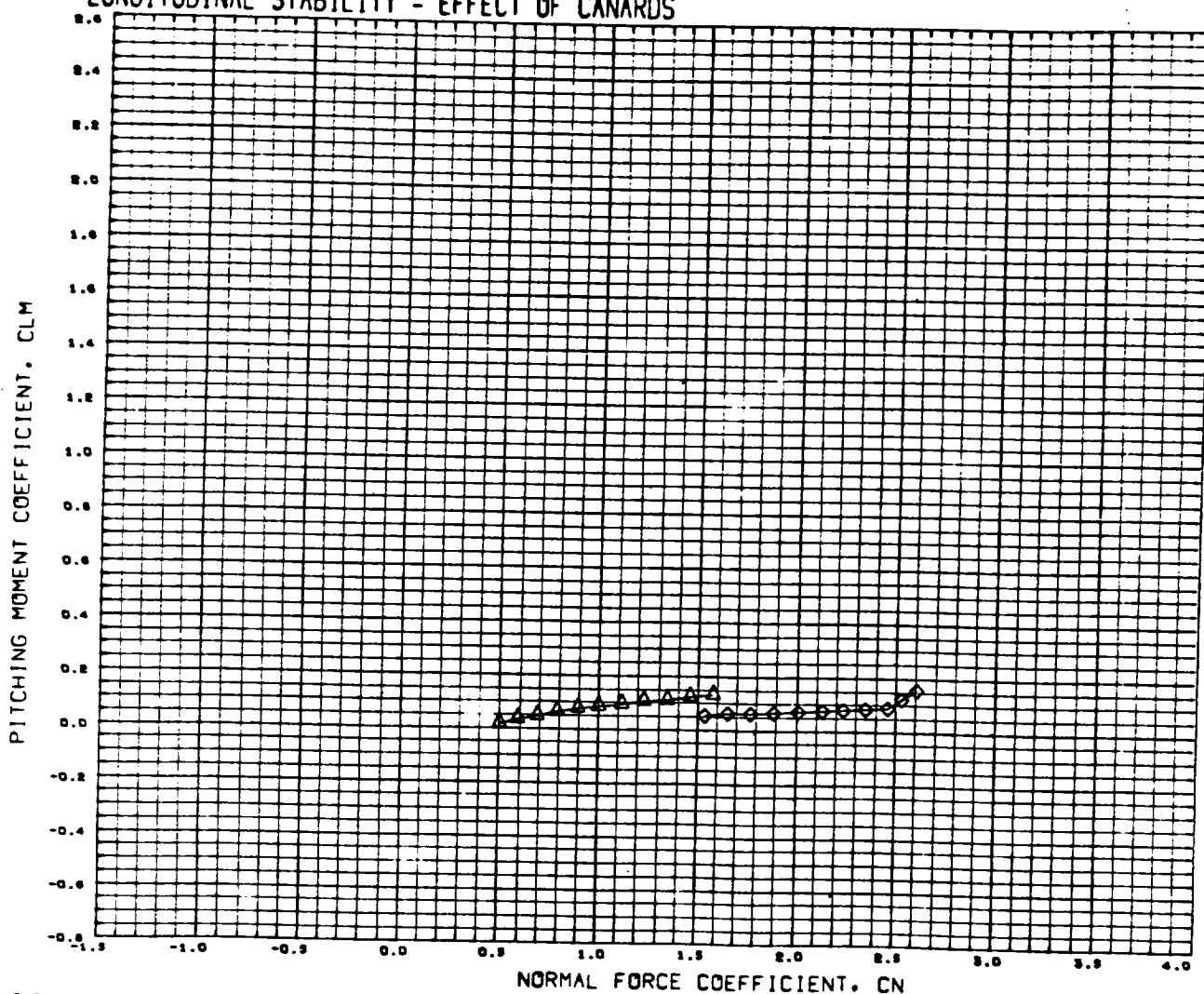
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	M496-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 sq.in.
(E3831M)	M496-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 in.
(E3832K)	M496-HSPC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 in.
						XMRP 2.4000 in.
						YMRP 0.0000 in.
						ZMRP 0.0000 in.
						SCALE 0.0025

MACH 3.460

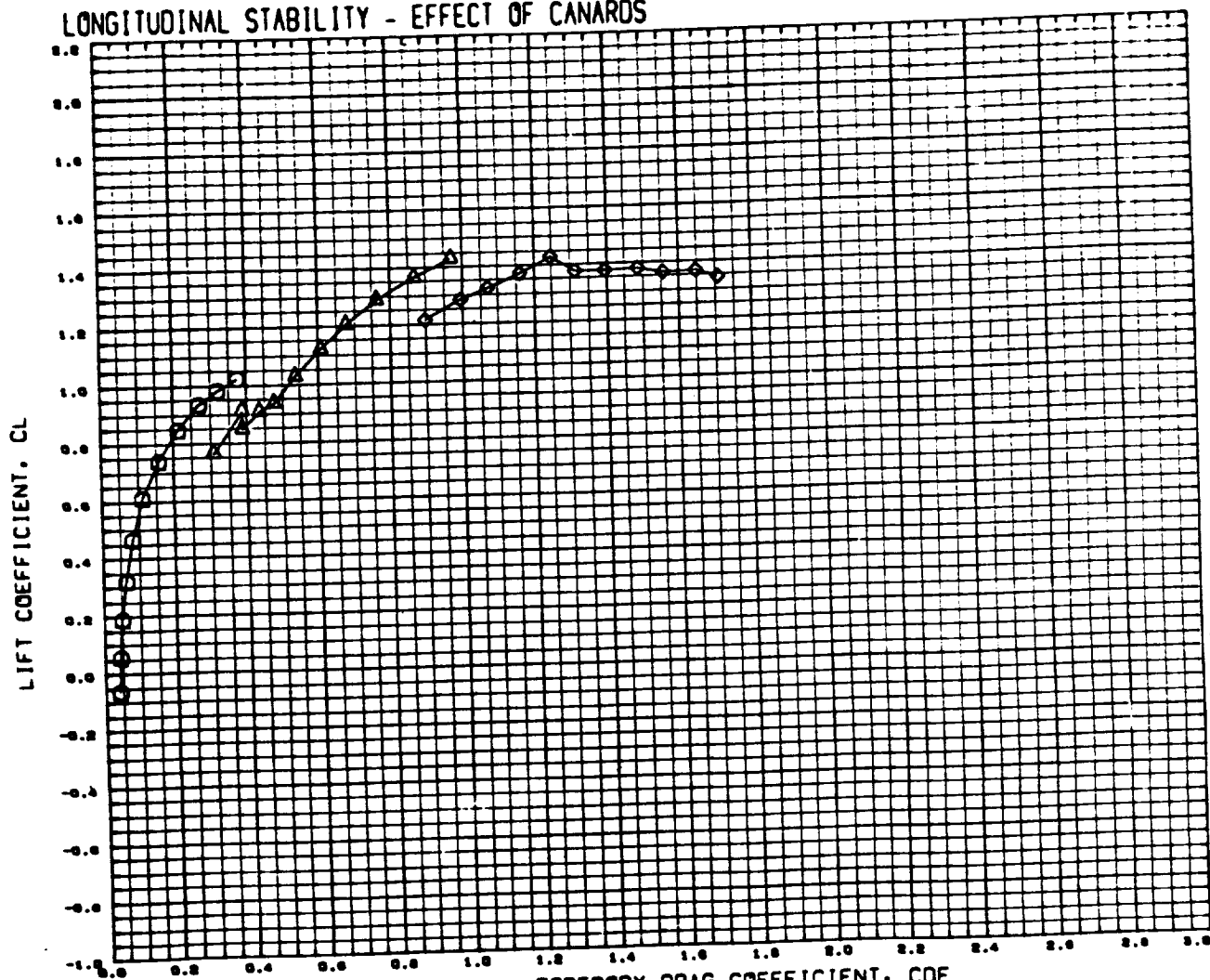
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	SREF 4.9327 50. IN.
(E3031M)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-40.000	LREF 1.8980 IN.
(E3032K)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
						ENRP 2.4000 IN.
						YNRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

MACH 4.959

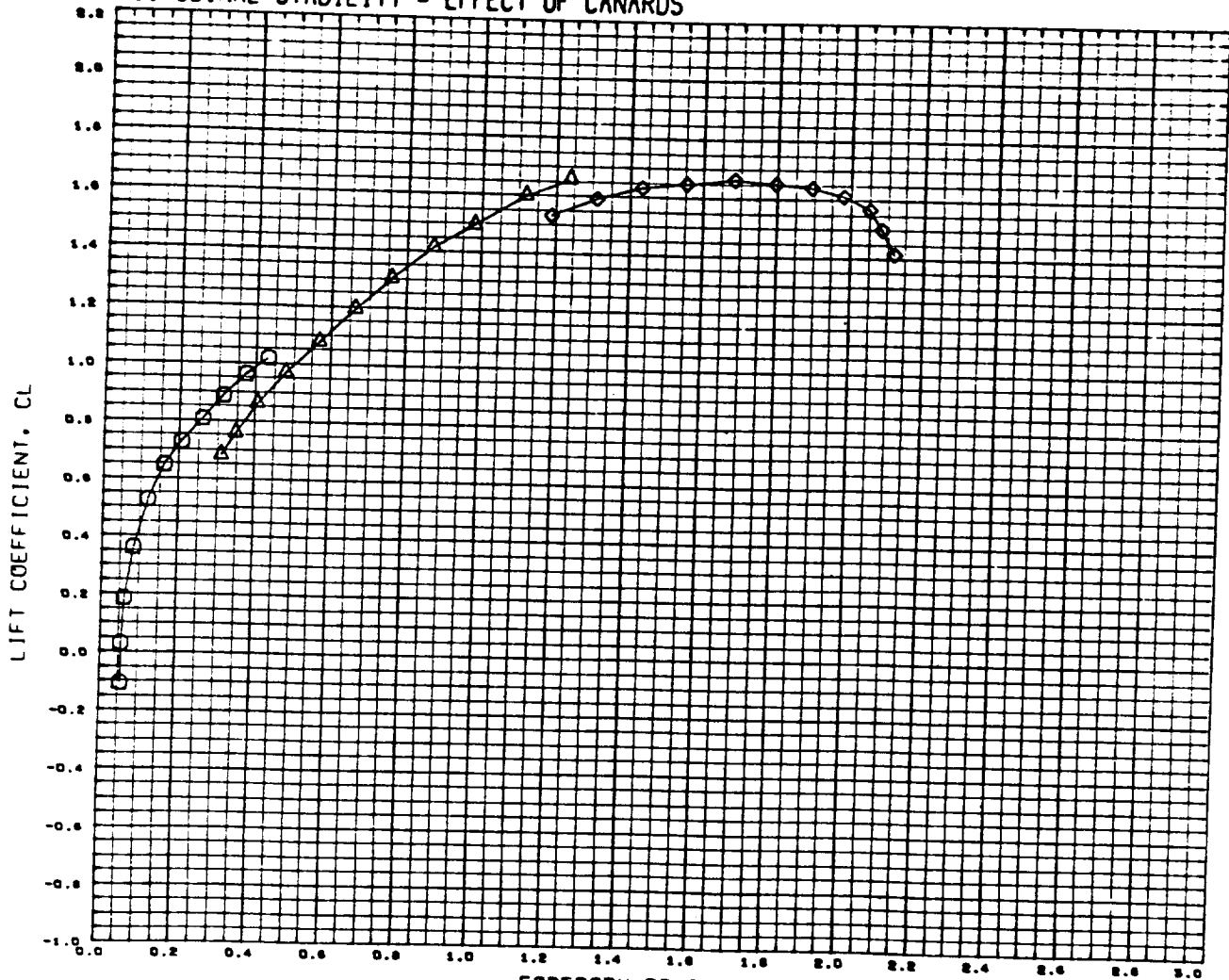
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	H496-HSFC AR11901-3 MODEL	0.000	0.000	0.000	0.000	SREF 4.9327 50.1N.
(E3031M)	H496-HSFC AR11901-3 MODEL	0.000	0.000	0.000	-40.000	LREF 1.8960 IN.
(E3032K)	H496-HSFC AR11901-3 MODEL	0.000	0.000	0.000	-60.000	SREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0025

NACH 0.199

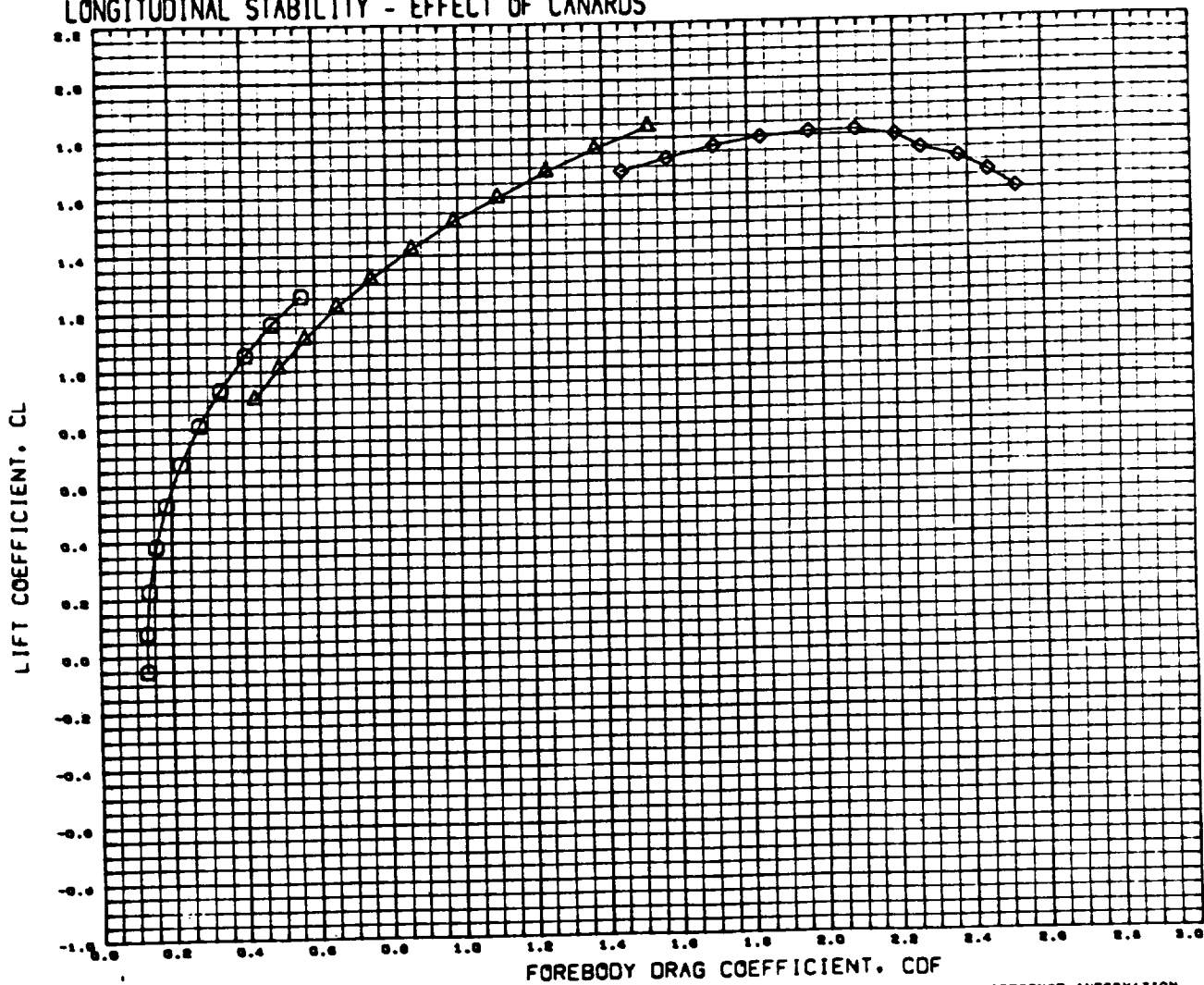
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MODEL	WAB2C12V2	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3829A)	○	M496-MSFC	AR11981-3	MODEL	WAB2C12V2	0.000	0.000	0.000	SREF 4.9327 50. IN.
(E3831H)	△	M496-MSFC	AR11981-3	MODEL	WAB2C12V2	0.000	0.000	0.000	LREF 1.8960 IN.
(E3832K)	◇	M496-MSFC	AR11981-3	MODEL	WAB2C12V2	0.000	0.000	0.000	BREF 3.7800 IN.
								-40.000	XMRP 2.4000 IN.
								-60.000	YMRP 0.0000 IN.
									ZMRP 0.0000 IN.
									SCALE 0.0025

MACH 0.905

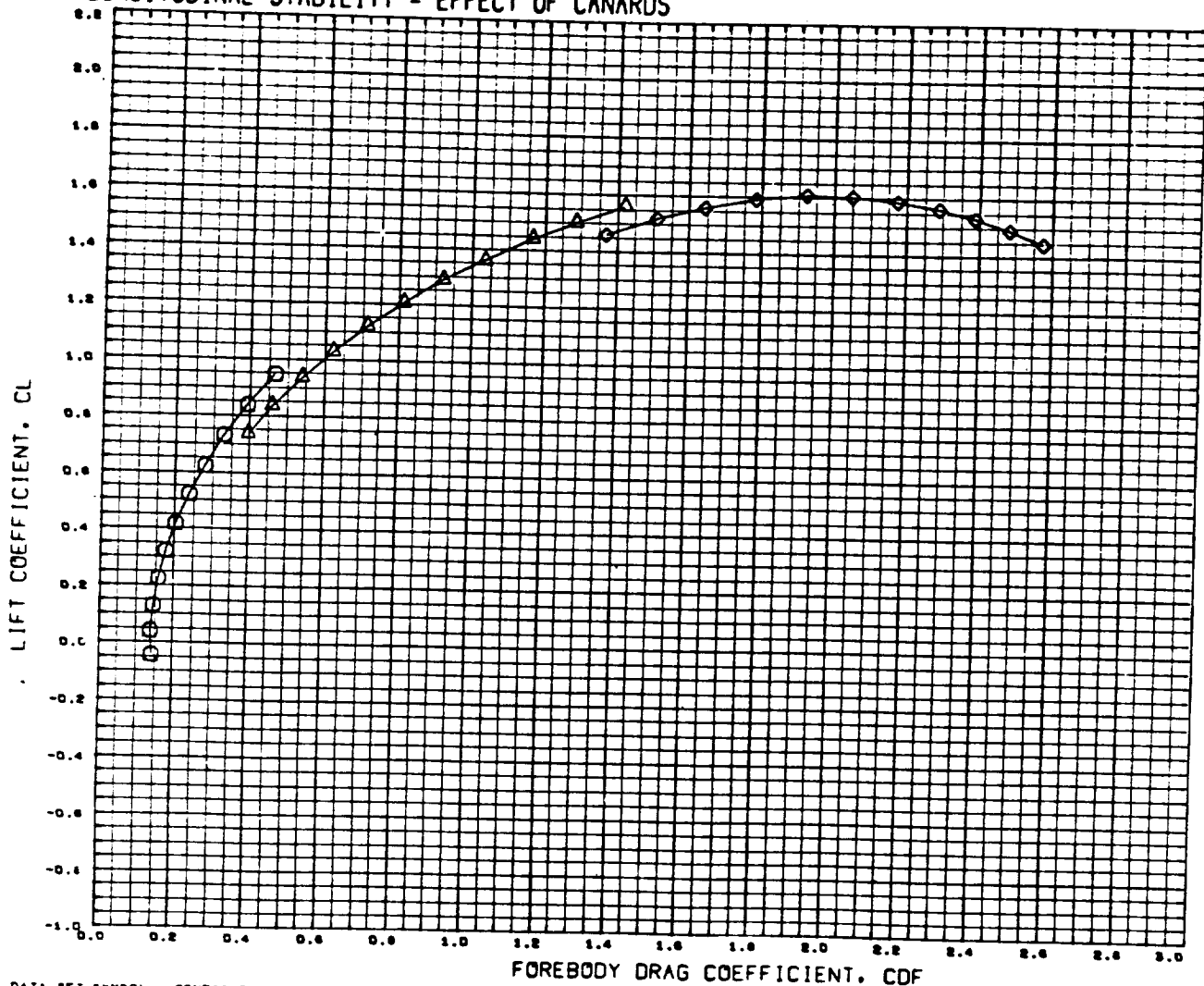
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET	SYMBOL	CONFIGURATION	DESCRIPTION	WABEC12V2	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3029A)	○	M496-HSPC	AR11901-3	MODEL	0.000	0.000	0.000	0.000	SREF 4.9327 53.1N.
(E3031M)	△	M496-HSPC	AR11901-3	MODEL	0.000	0.000	0.000	-40.000	LREF 1.6980 1N.
(E3032H)	◇	M496-HSPC	AR11901-3	MODEL	0.000	0.000	0.000	-80.000	SREF 3.7200 1N.
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									YMRP 0.0000 1N.
									ZMRP 0.0000 1N.
									SCALE 0.0025

MACH 1.197

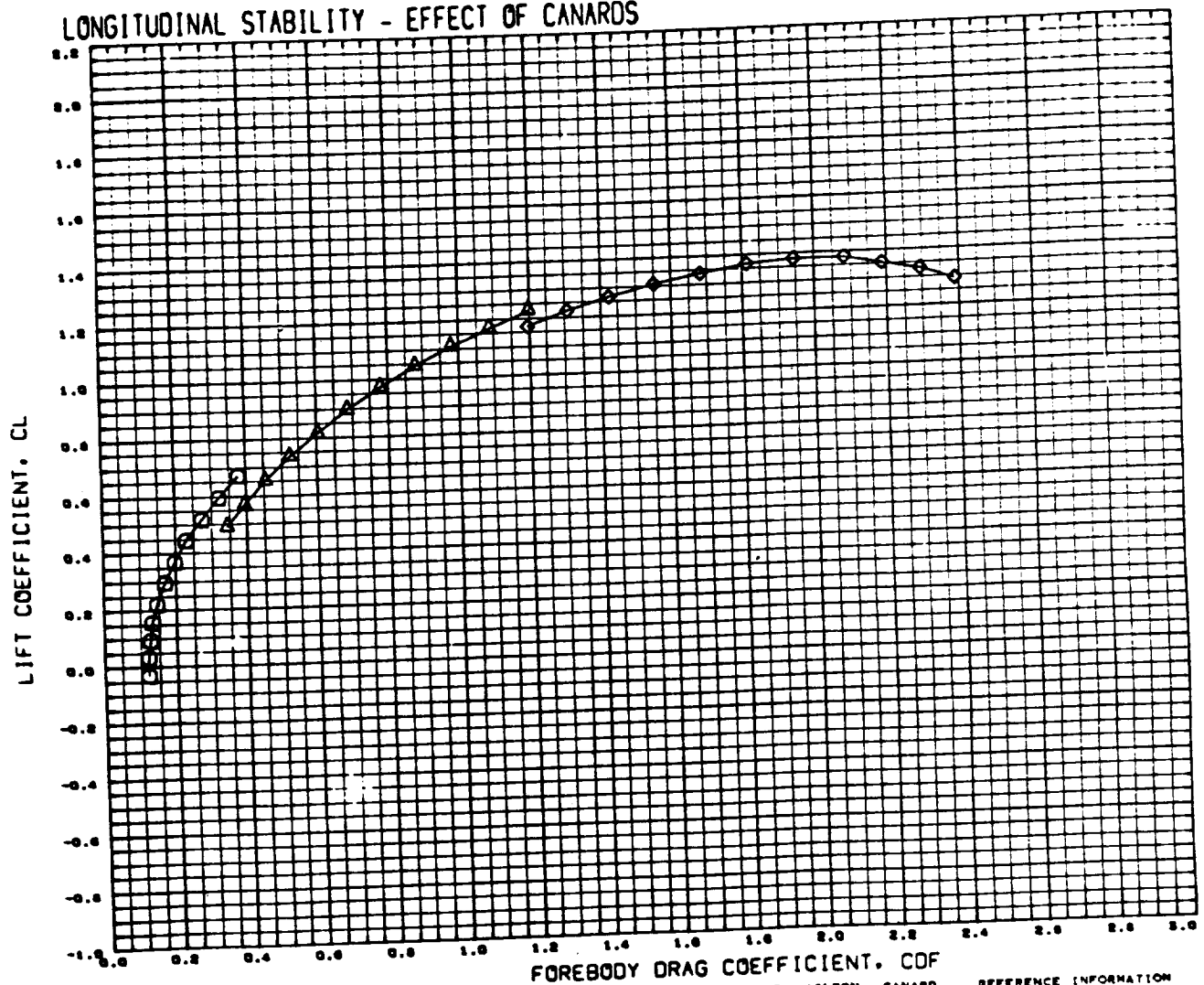
LONGITUDINAL STABILITY - EFFECT OF CANARDS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	REFERENCE INFORMATION
(E3929A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SREF 4.9327 SQ. IN.
(E3931M)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-40.000	LREF 1.6980 IN.
(E3932K)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	-60.000	BREF 3.7200 IN.
						XMRP 2.4000 IN.
						YMRP 0.0000 IN.
						ZMRP 0.0000 IN.
						SCALE 0.0023

MACH 1.963

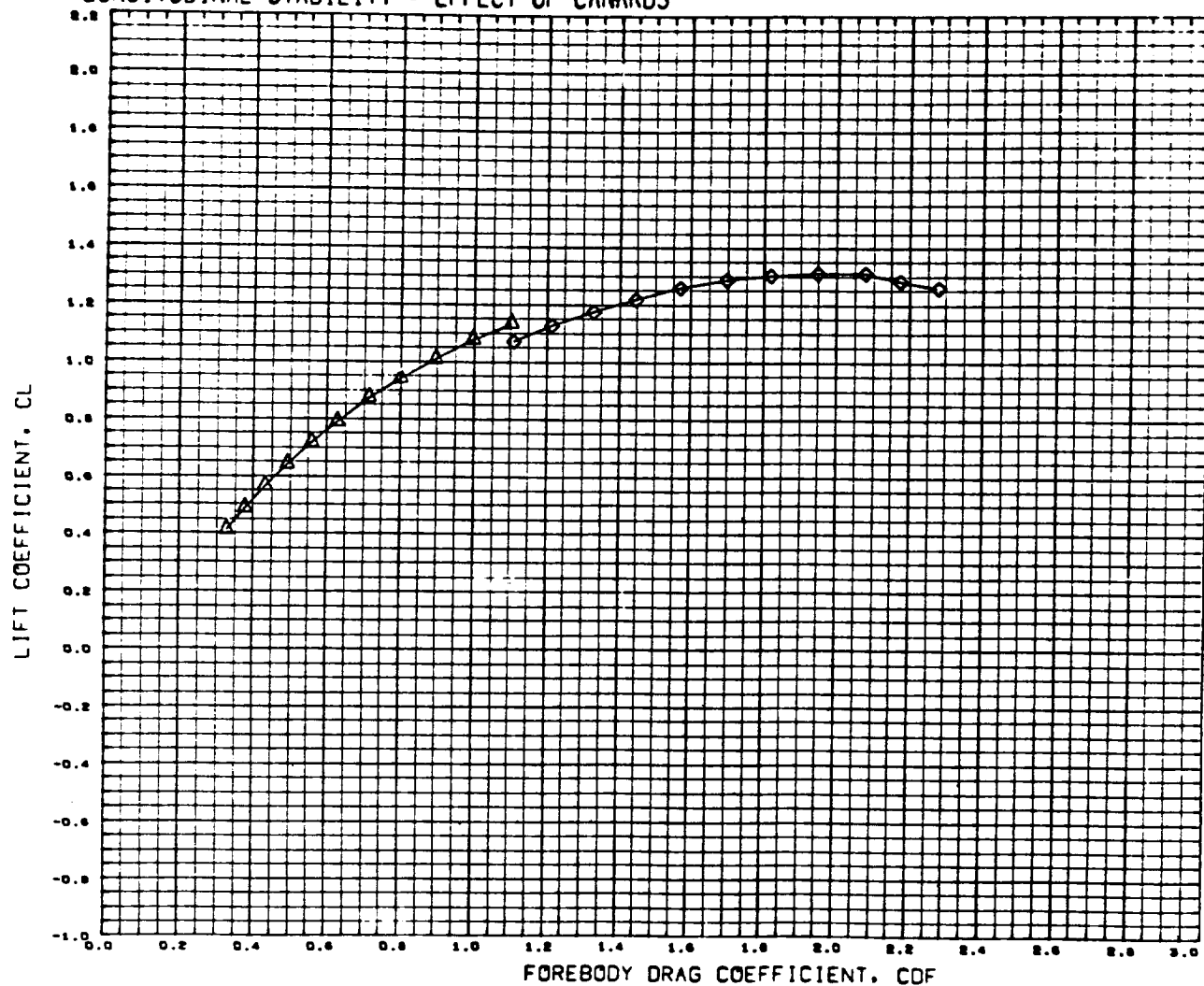
LONGITUDINAL STABILITY - EFFECT OF CANARDS



CONFIGURATION DESCRIPTION					BETA		ELEVTR	AILRON	CANARD	SREF	4.9327	SQ. IN.
DATA SET SYMBOL												
(E3029A)	○	H496-H3FC	AR11981-3	MODEL	W482C12V2	0.000	0.000	0.000	0.000	SREF	4.9327	SQ. IN.
(E3031N)	△	H496-H3FC	AR11981-3	MODEL	W482C12V2	0.000	0.000	0.000	-40.000	LREF	1.8960	IN.
(E3032K)	◇	H496-H3FC	AR11981-3	MODEL	W482C12V2	0.000	0.000	0.000	-60.000	BREF	3.7200	IN.
										XMRP	2.4000	IN.
										YMRP	0.0000	IN.
										ZMRP	0.0000	IN.
										SCALE	0.0025	

MACH 3.400

LONGITUDINAL STABILITY - EFFECT OF CAMARDS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

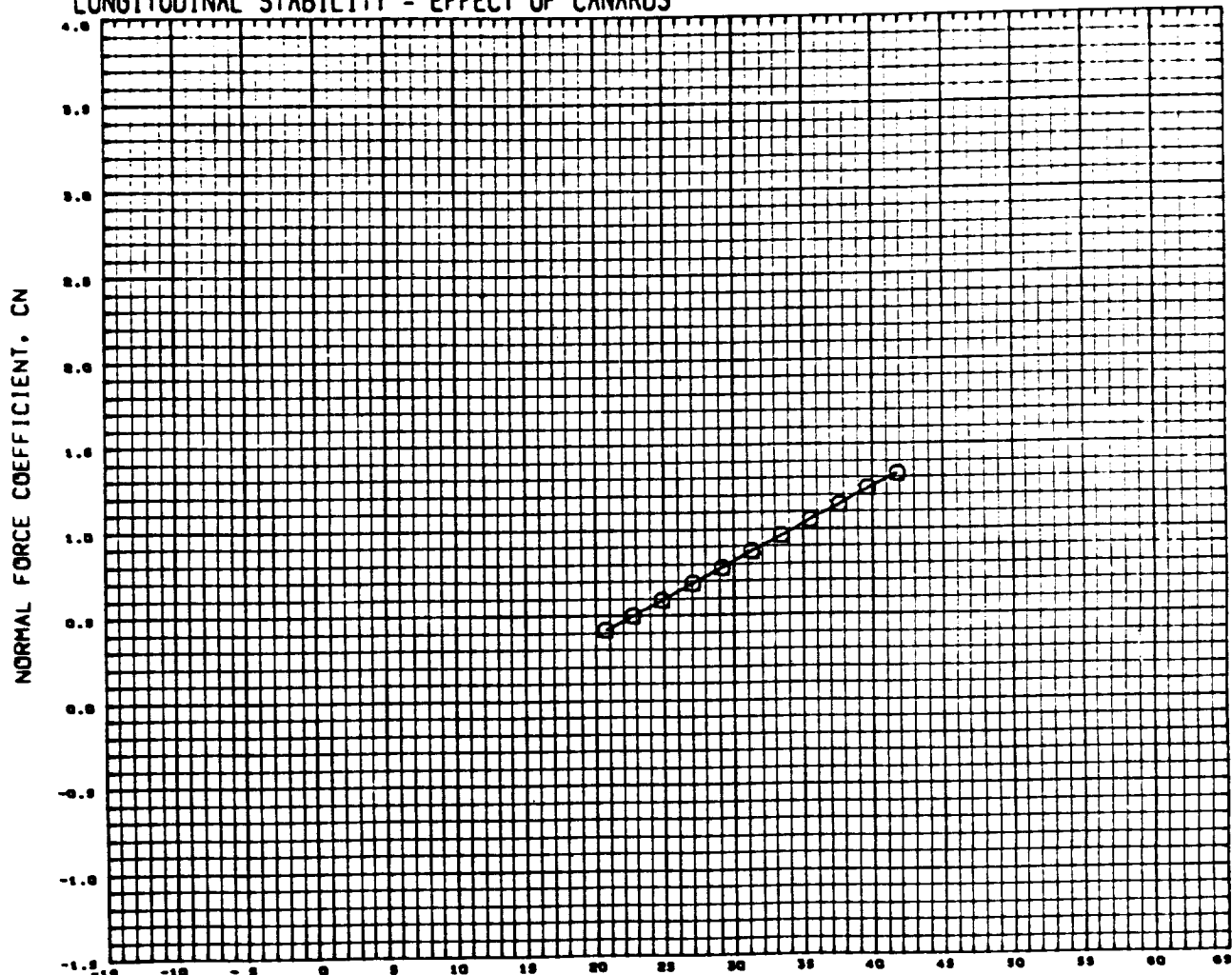
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 (E3831N) M496-HSFC AR11981-3 MODEL W4B2C12V2
 (E3832K) M496-HSFC AR11981-3 MODEL W4B2C12V2

BETA ELEVTR AILRON CANARD
 0.000 0.000 0.000 0.000
 0.000 0.000 0.000 -40.000
 0.000 0.000 0.000 -60.000

REFERENCE INFORMATION
 SREF 4.9327 80. IN.
 LREF 1.6980 IN.
 BREF 3.7200 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

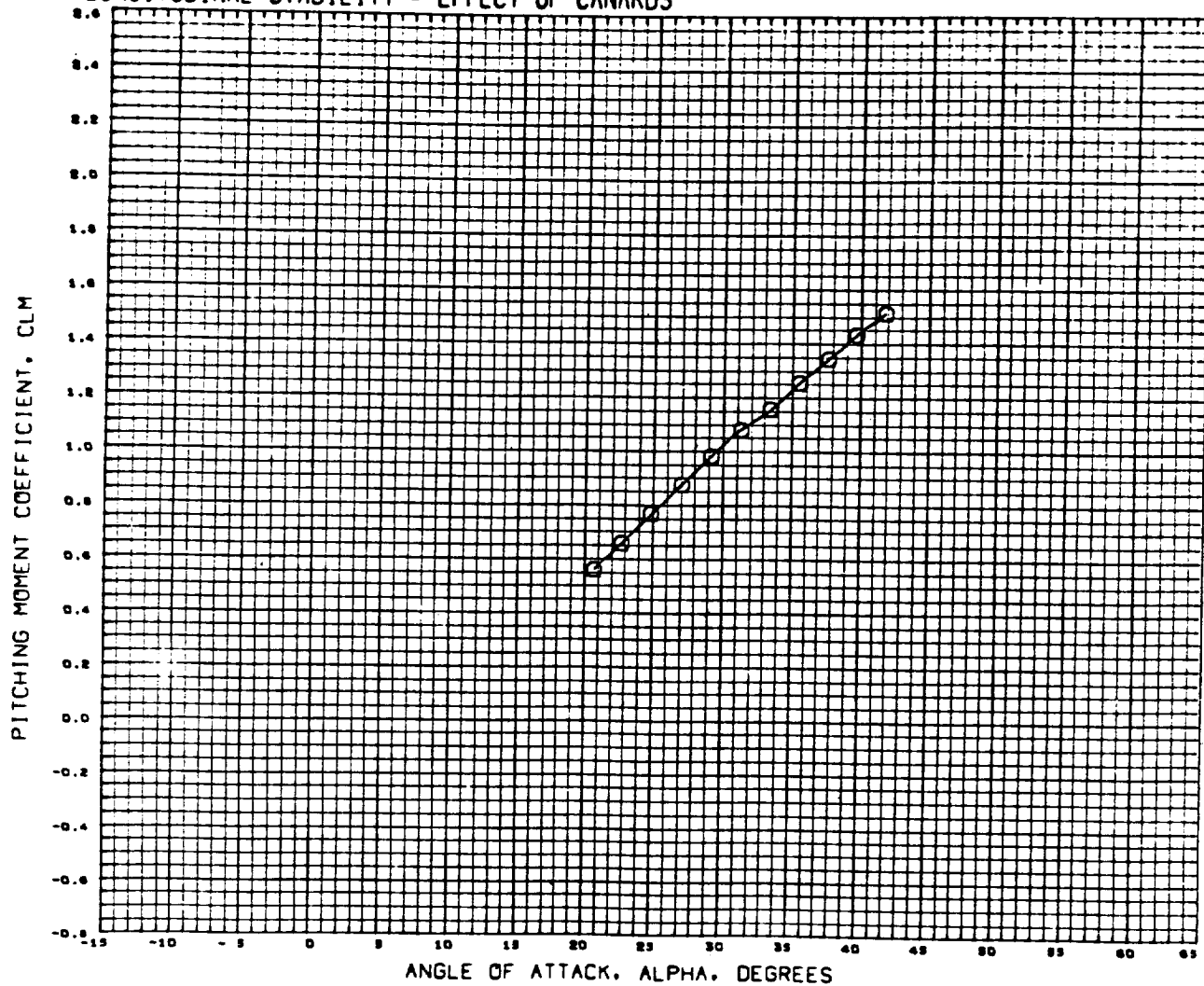
MACH 4.959

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES		REFERENCE INFORMATION	
○		1.992	BETA	0.000	CANARD - 40.000	SREF	4.0225 30. IN.
						LREF	1.5380 IN.
						BREF	4.3000 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH PARAMETRIC VALUES
 O 1.952 BETA 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.9560 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

B2C12

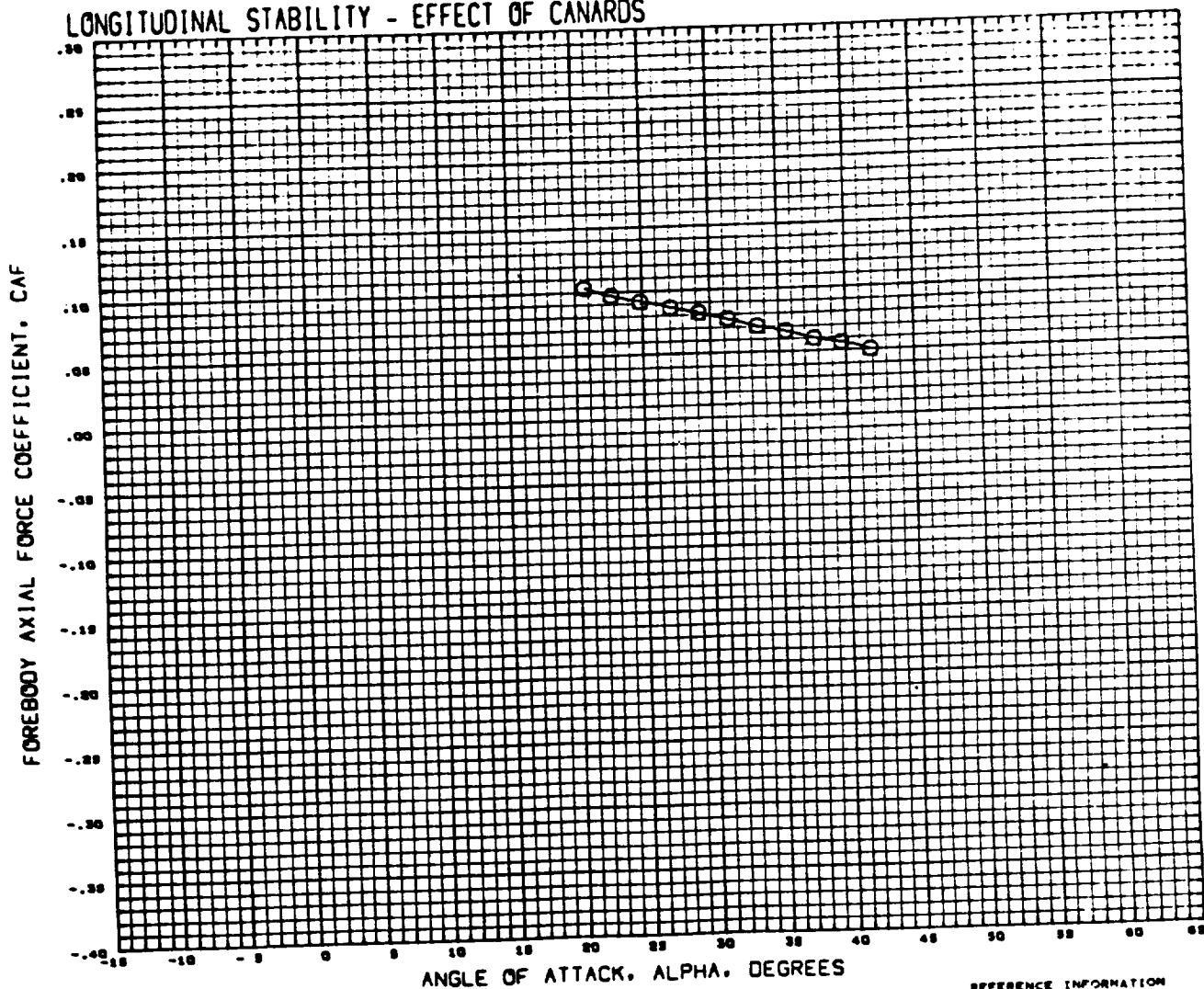
(E3804M)

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713

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.992 BETA 0.000 CANARD - 40.000

PARAMETRIC VALUES

REFERENCE INFORMATION
 SREF 4.6225 30. IN.
 LREF 1.3360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE WE

M496-MSFC

AR11981-3

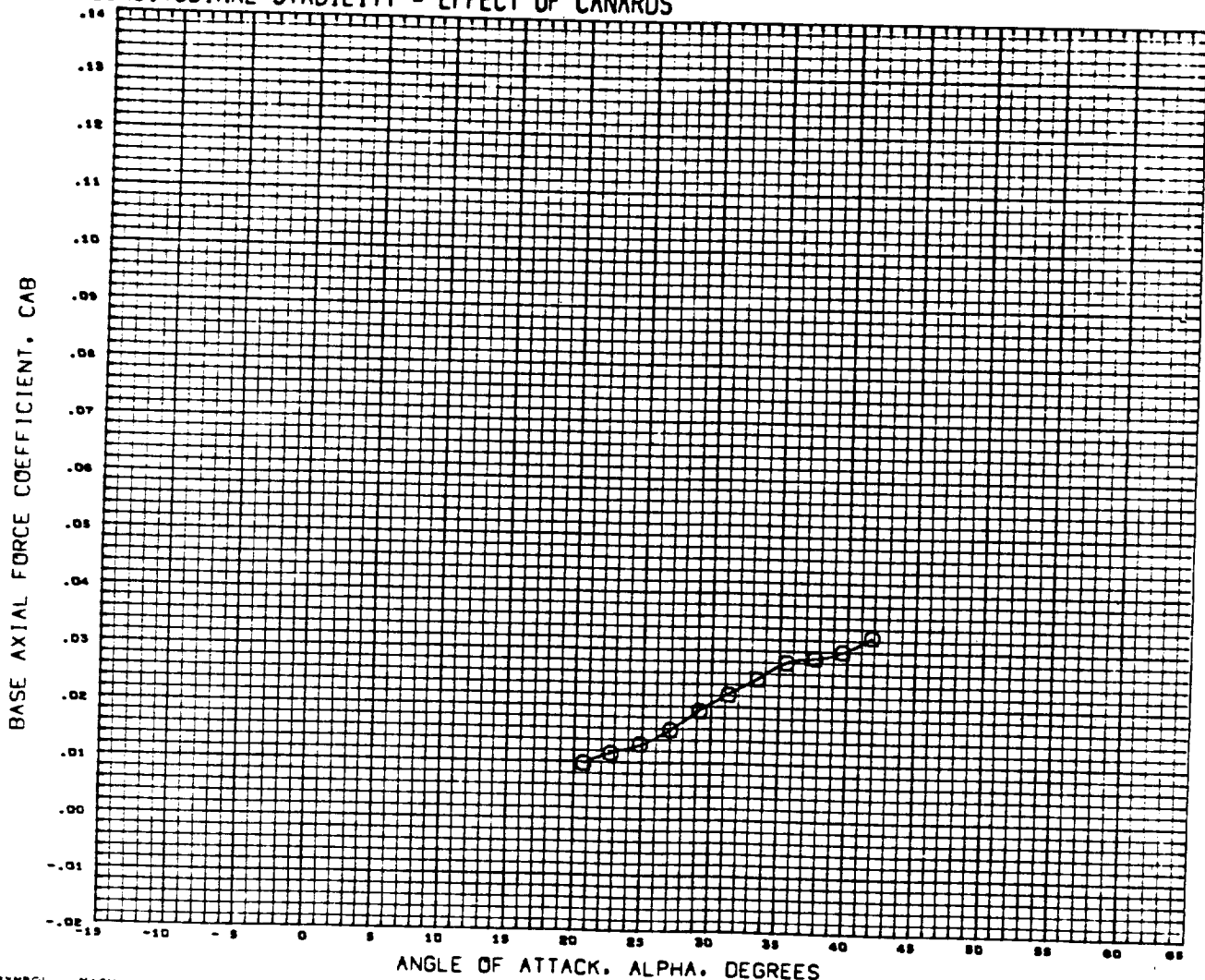
MODEL

B2C12

(E3804M) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.932 BETA 0.000 CANARD - 40.000

ANGLE OF ATTACK, ALPHA, DEGREES

DATA HIST. CODE 0E

REFERENCE INFORMATION
 BREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 8.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025 IN.

M496-MSFC

AR11981-3

MODEL

B2C12

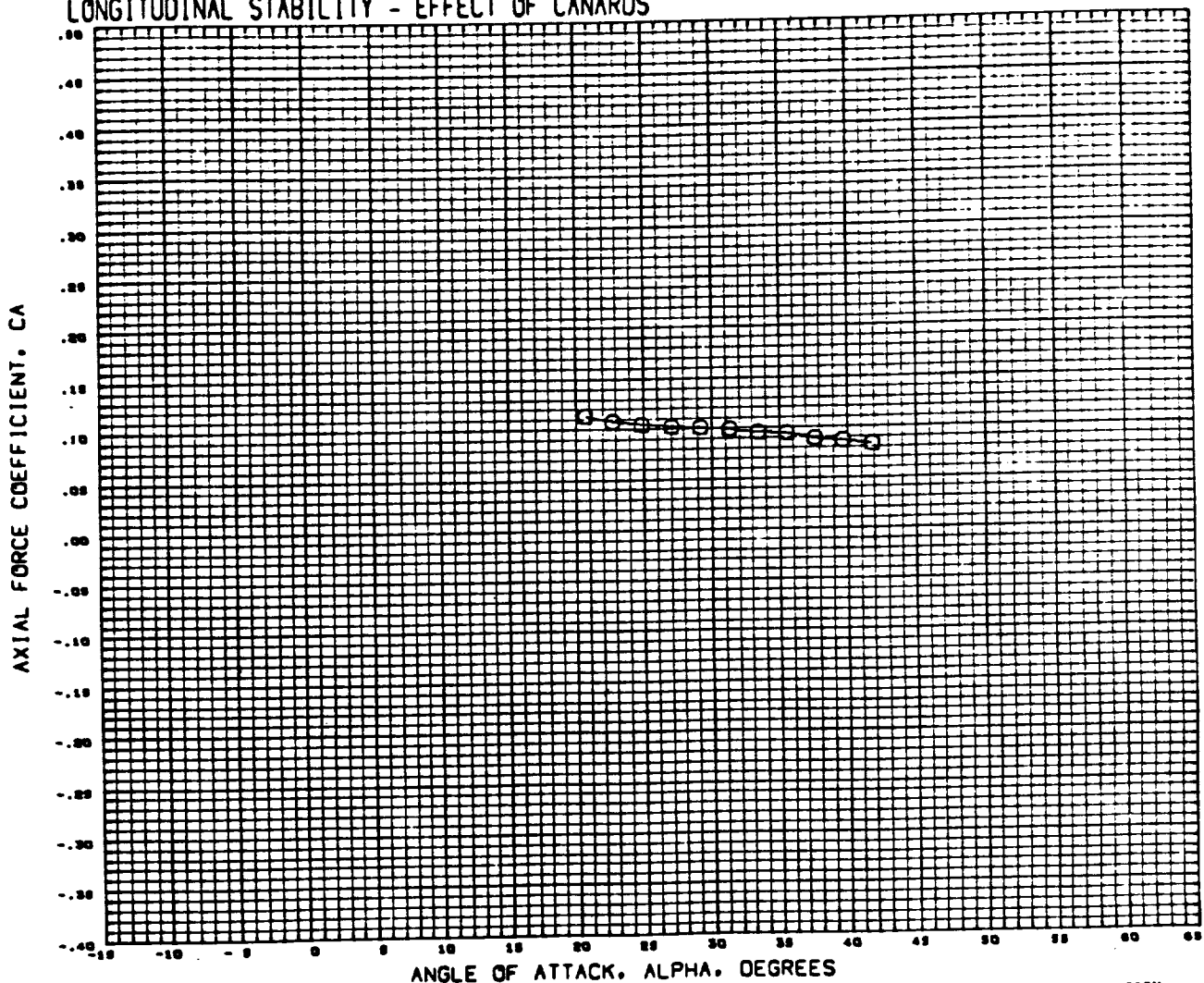
(E3804M)

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715

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.922 BETA 0.000 CANARD - 40.000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREP	4.6225	30. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

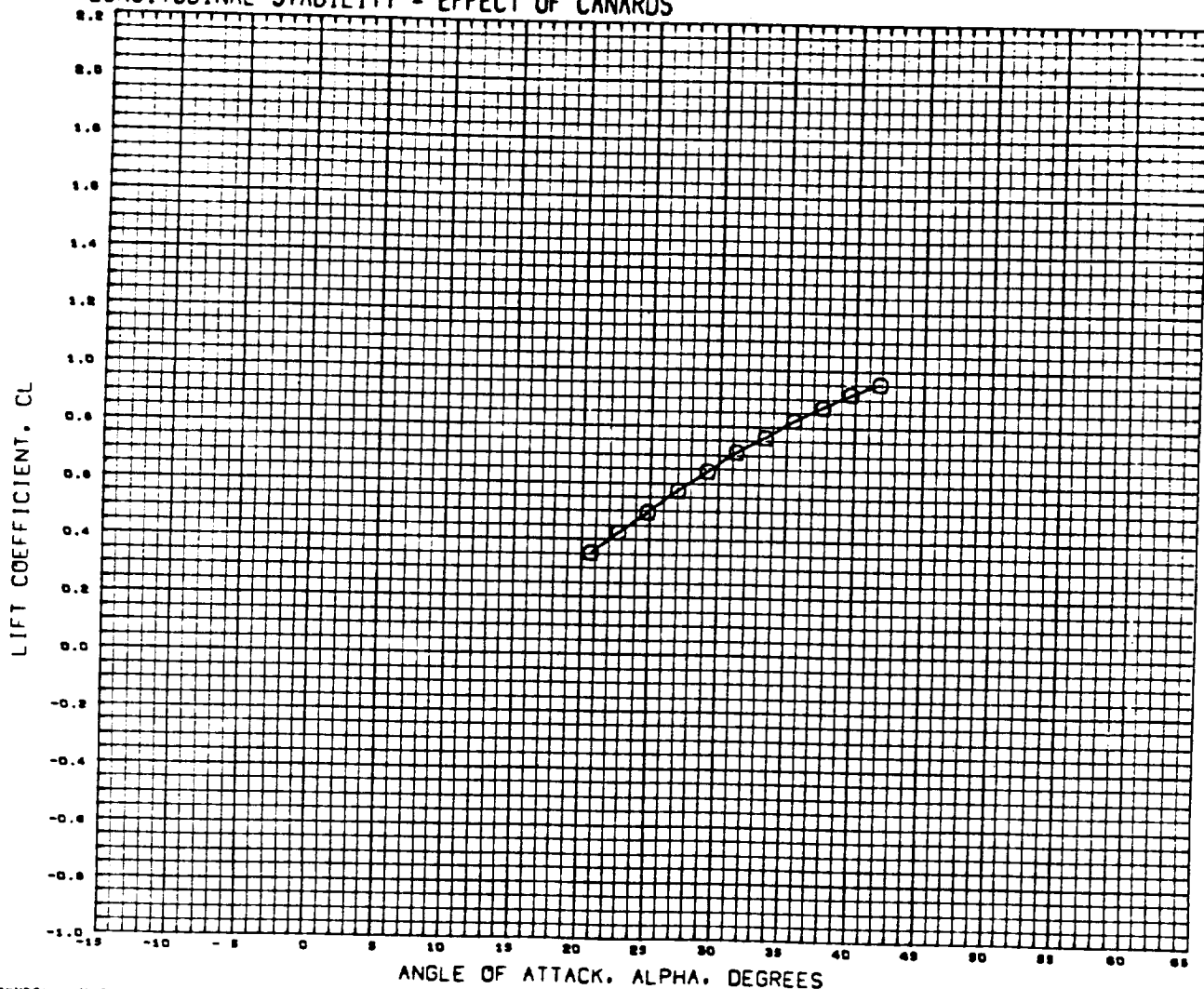
MODEL

B2C12

(E3804M) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.952 BETA 0.000 CANARD - 40.000

DATA HIST. CODE *E

REFERENCE INFORMATION
 SREF 4.0225 SQ. IN.
 LREF 1.9360 IN.
 BREF 4.3000 IN.
 YREF 2.4000 IN.
 ZREF 0.0000 IN.
 SCALE 0.0025 IN.

M496-MSFC

AR1198I-3

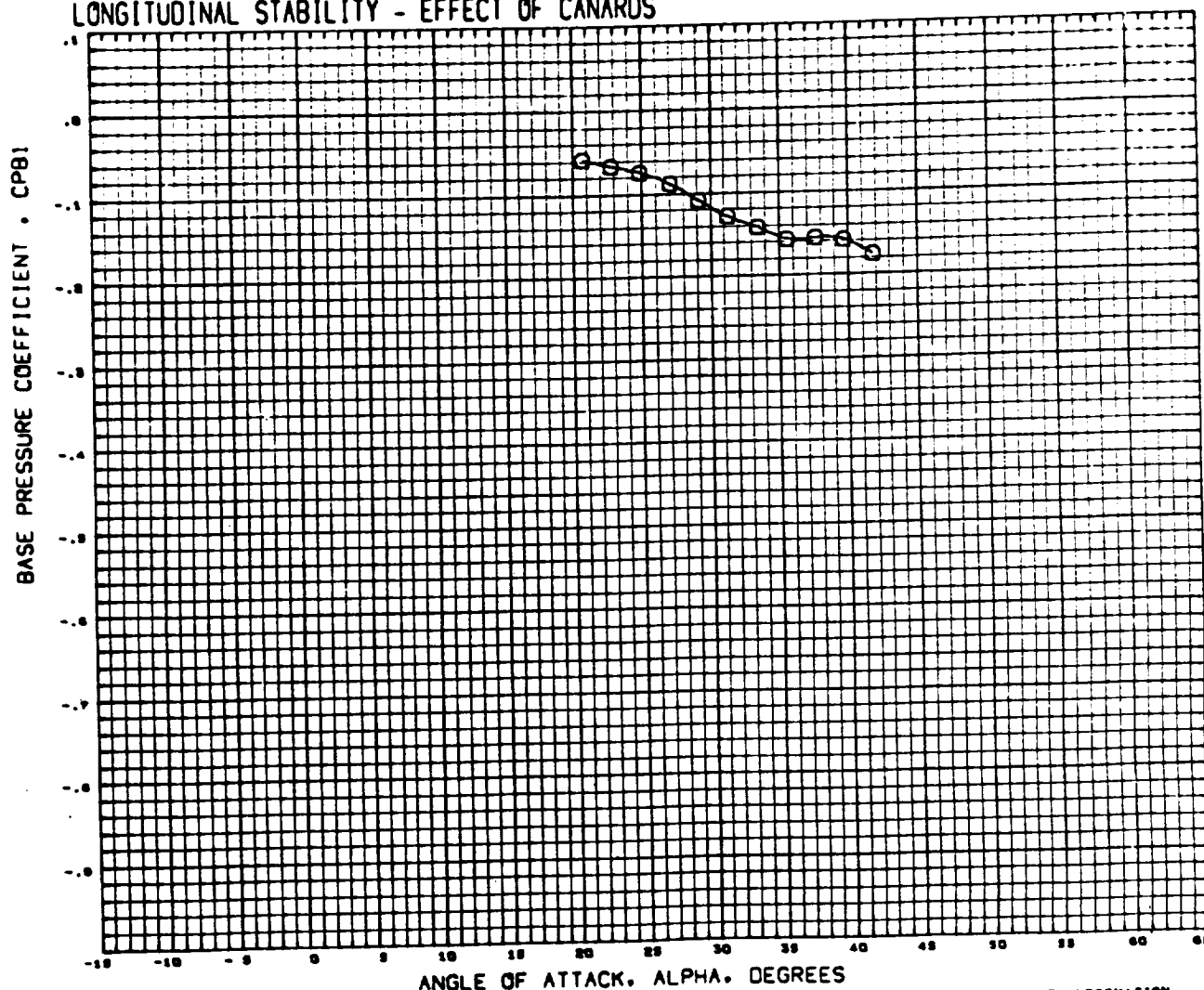
MODEL

B2C12

(E3804M) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.998 BETA 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREP 4.9225 80. IN.
 LREP 1.3360 IN.
 BREP 4.3000 IN.
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 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

M496-MSFC

AR11981-3

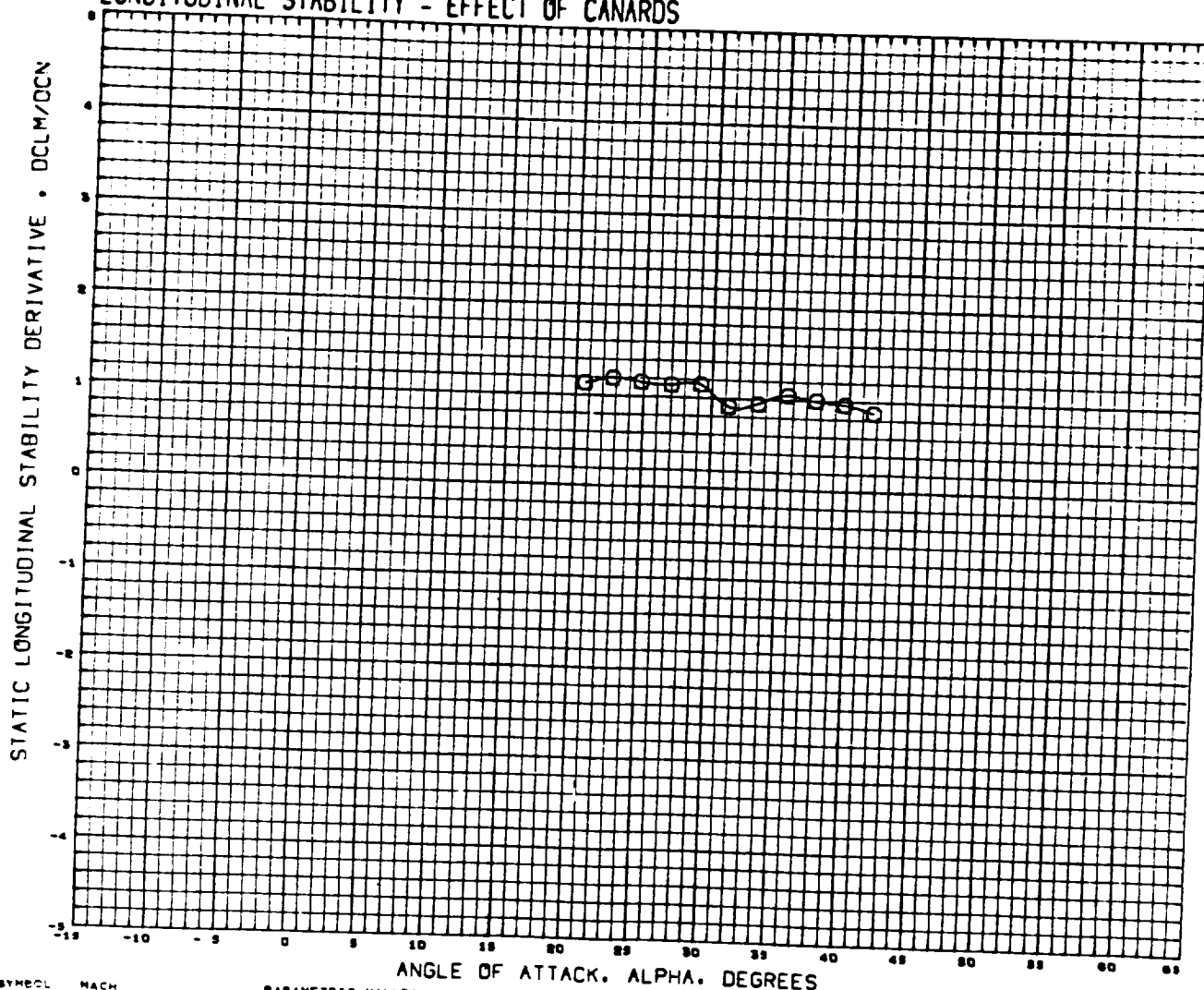
MODEL

B2C12

(E3804M) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 1.952 BETA 0.000 CANARD - 40.000

PARAMETRIC VALUES

REFERENCE INFORMATION

SREF	4.6225	80. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE *E

M496-MSFC

AR11981-3

MODEL

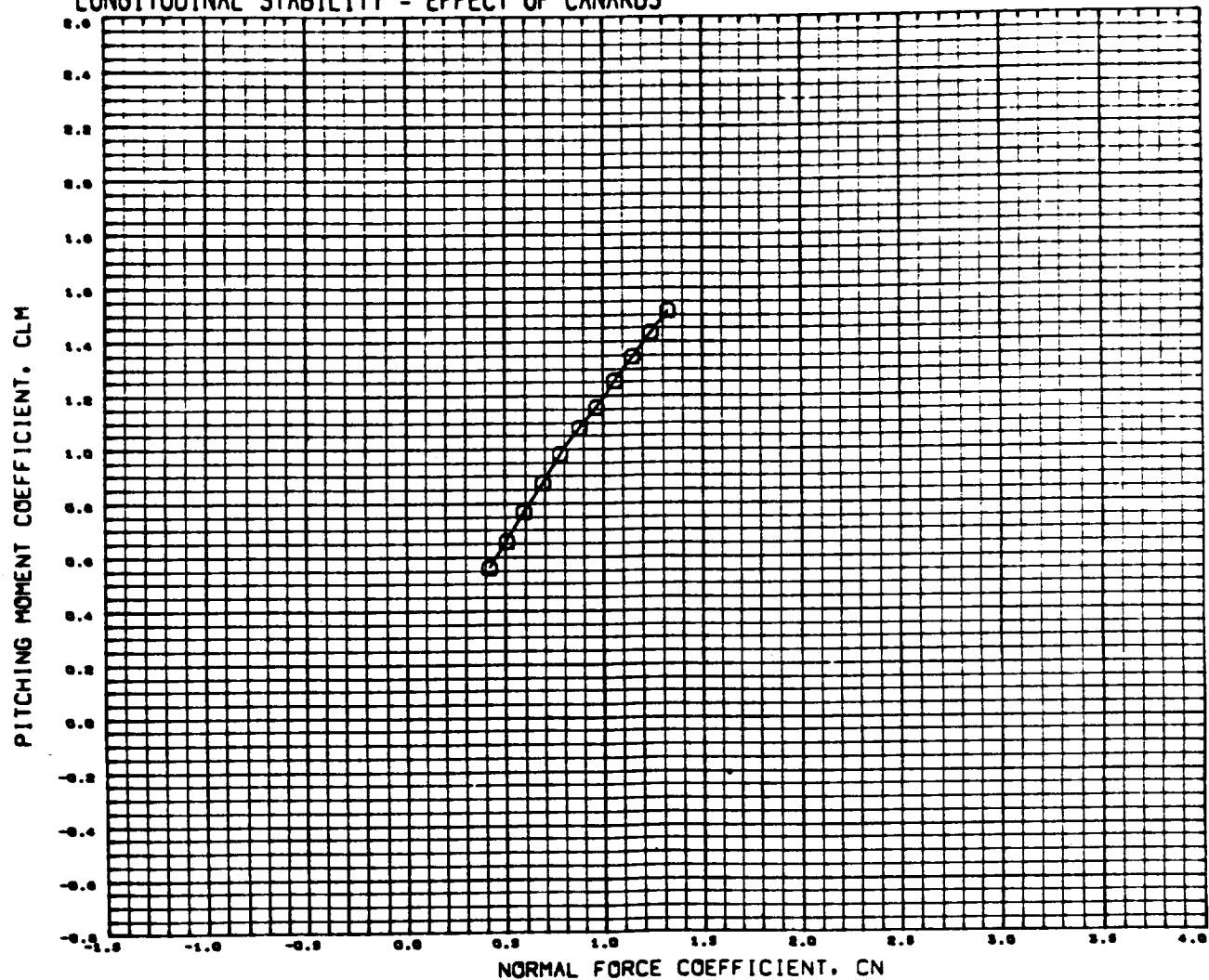
B2C12

(E3804M)

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH PARAMETRIC VALUES
 O 1.958 BETA 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREP 4.6223 SQ. IN.
 LREP 1.9360 IN.
 BREP 4.3000 IN.
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 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

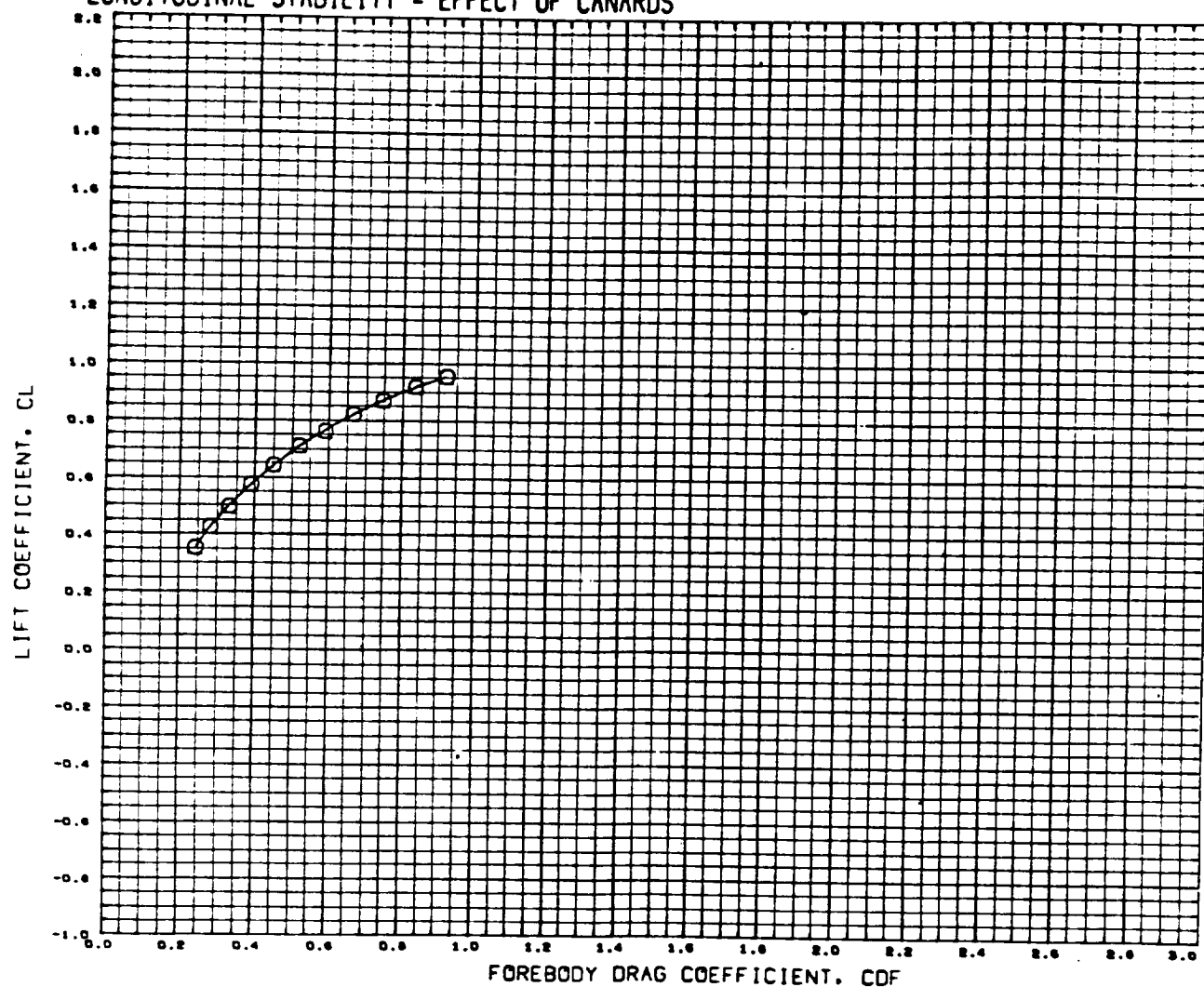
MODEL

B2C12

(E3804M) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

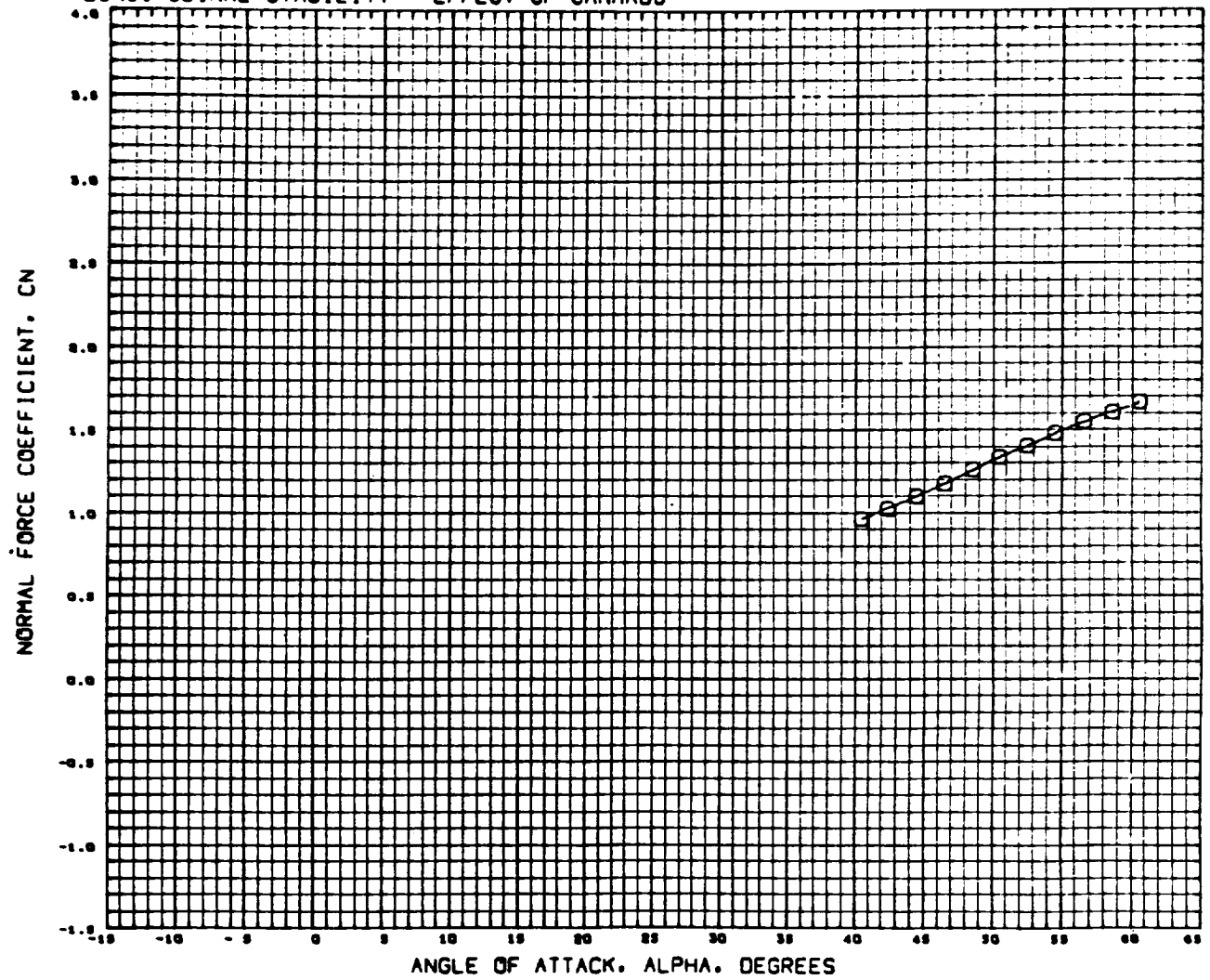


SYMBOL MACH PARAMETRIC VALUES
 O 1.952 BETA 0.000 CANARD - 40.000

REFERENCE INFORMATION
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 BREF 4.3000 IN.
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 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

LONGITUDINAL STABILITY - EFFECT OF CANARDS



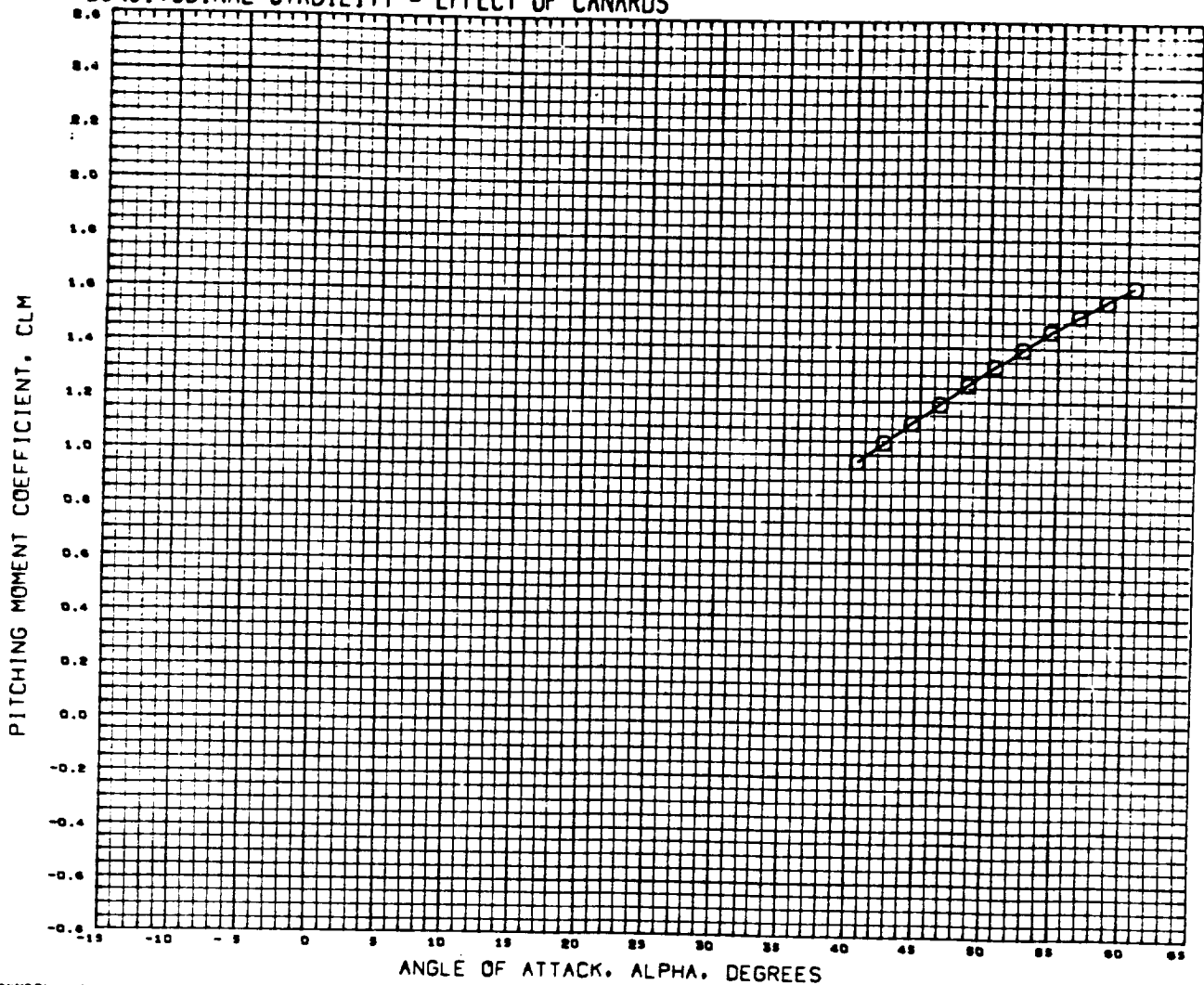
SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL B2C12 (E3805K) 06 SEP 72 PAGE 722

LONGITUDINAL STABILITY - EFFECT OF CANARDS

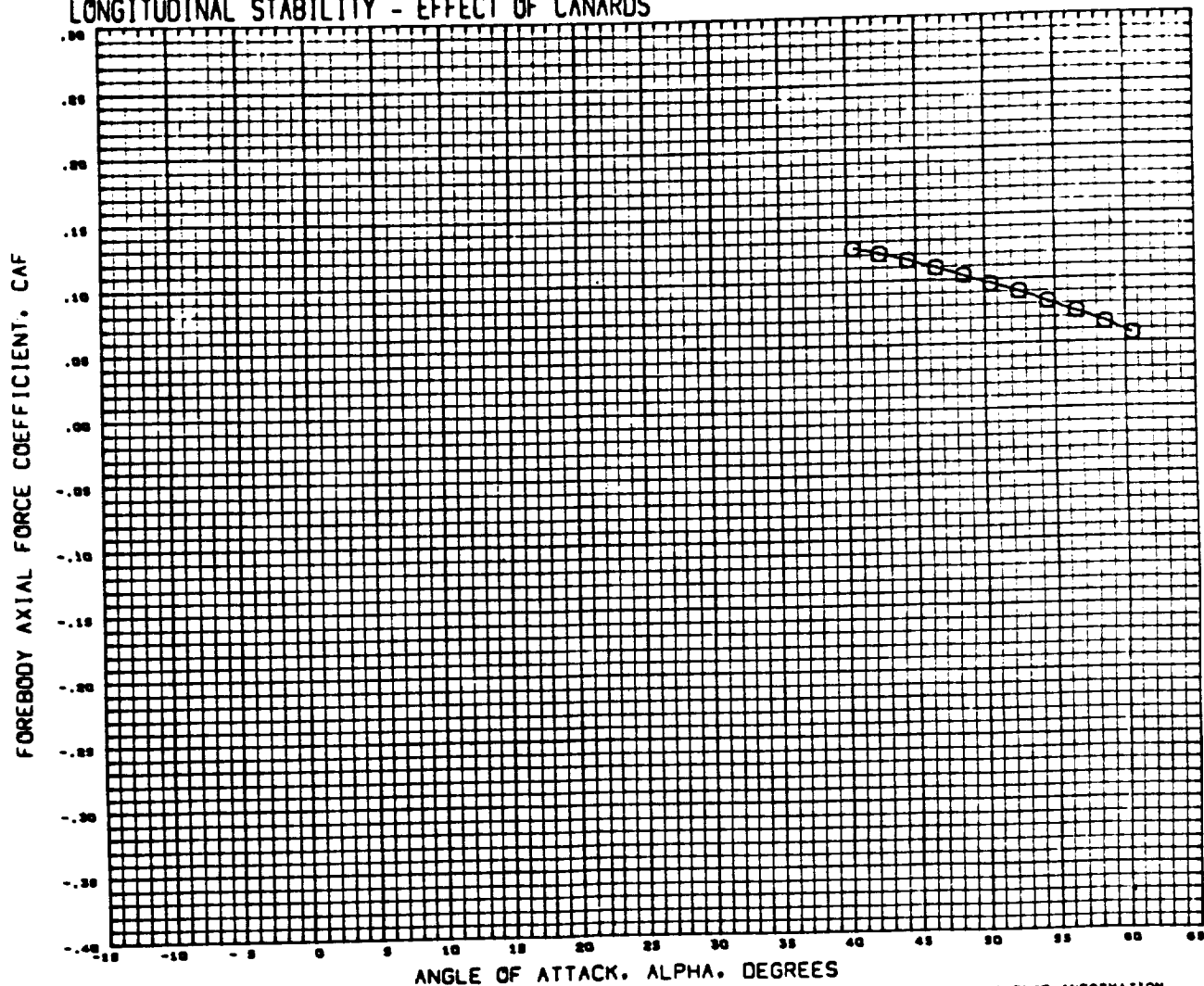


SYMBOL \bigcirc MACH 4.955 BETA 0.000 CANARD - 80.000

DATA HIST. CODE *E

REFERENCE INFORMATION
 BREP 4.6225 80. IN.
 LREP 1.5360 IN.
 GREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.930 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
 SRFP 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BRFP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

M496-MSFC

AR11981-3

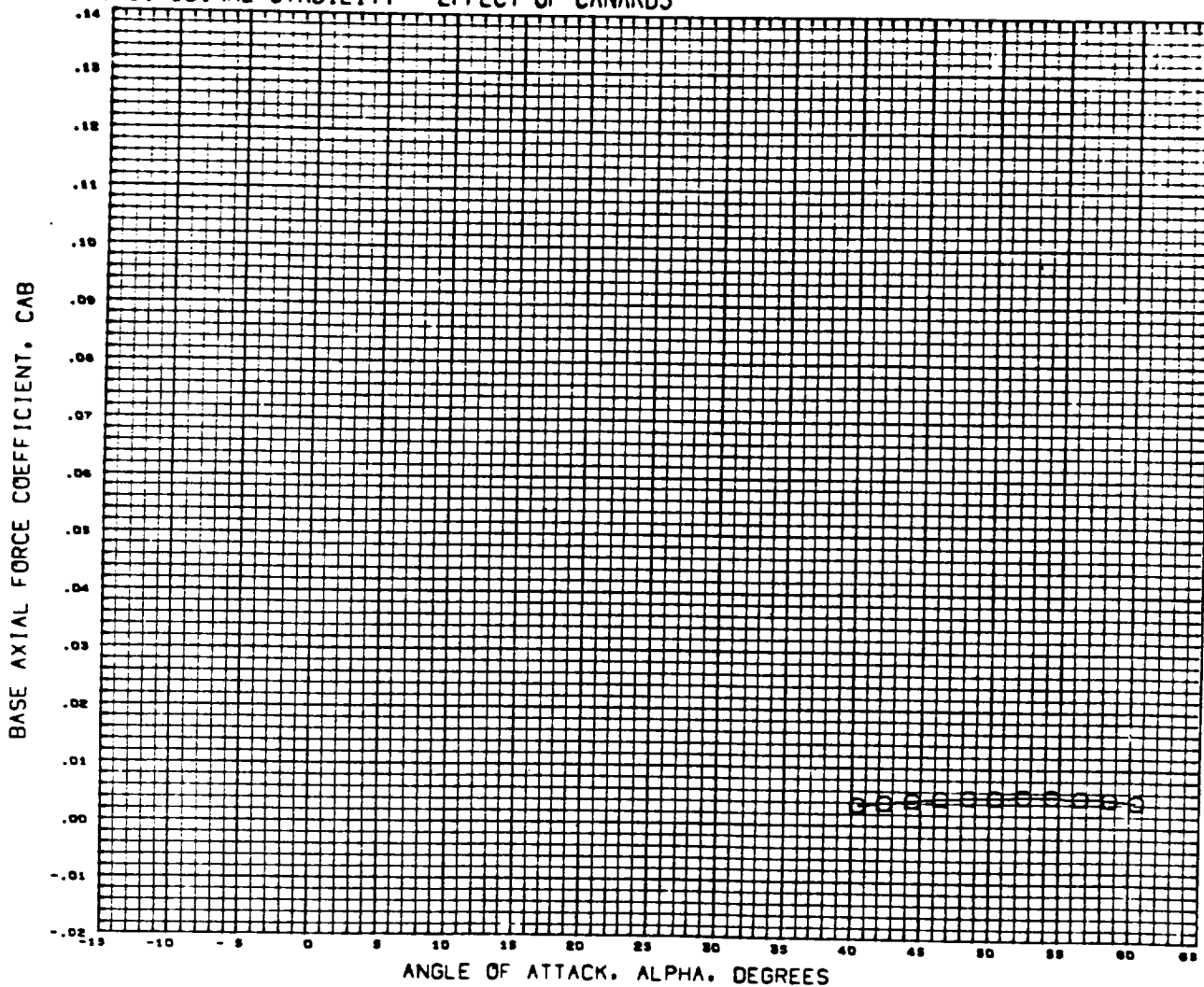
MODEL

B2C12

(E3805K) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

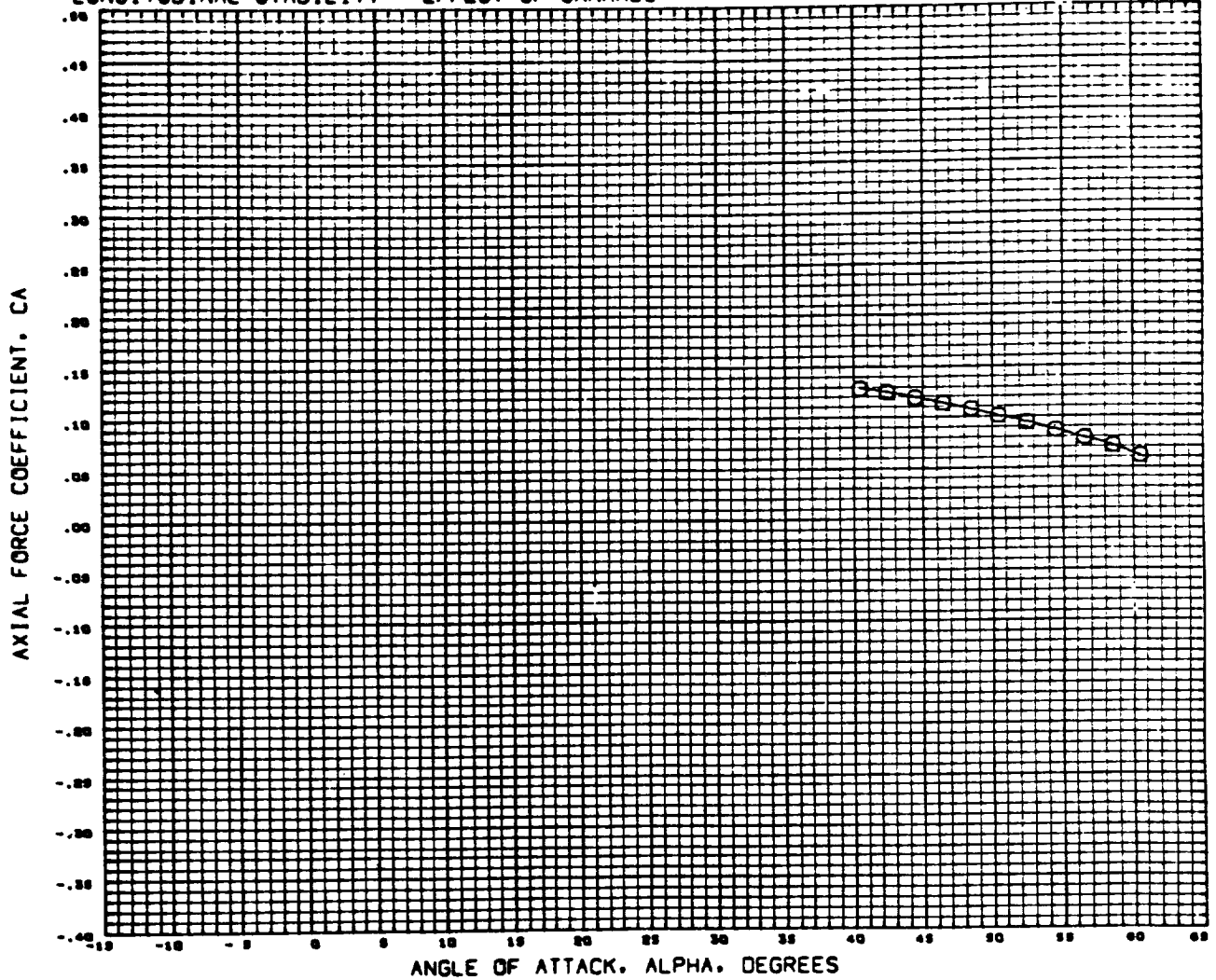


SYMBOL MACH PARAMETRIC VALUES
 O 4.959 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
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 SCALE 0.0025

DATA HIST. CODE *E

LONGITUDINAL STABILITY - EFFECT OF CANARDS

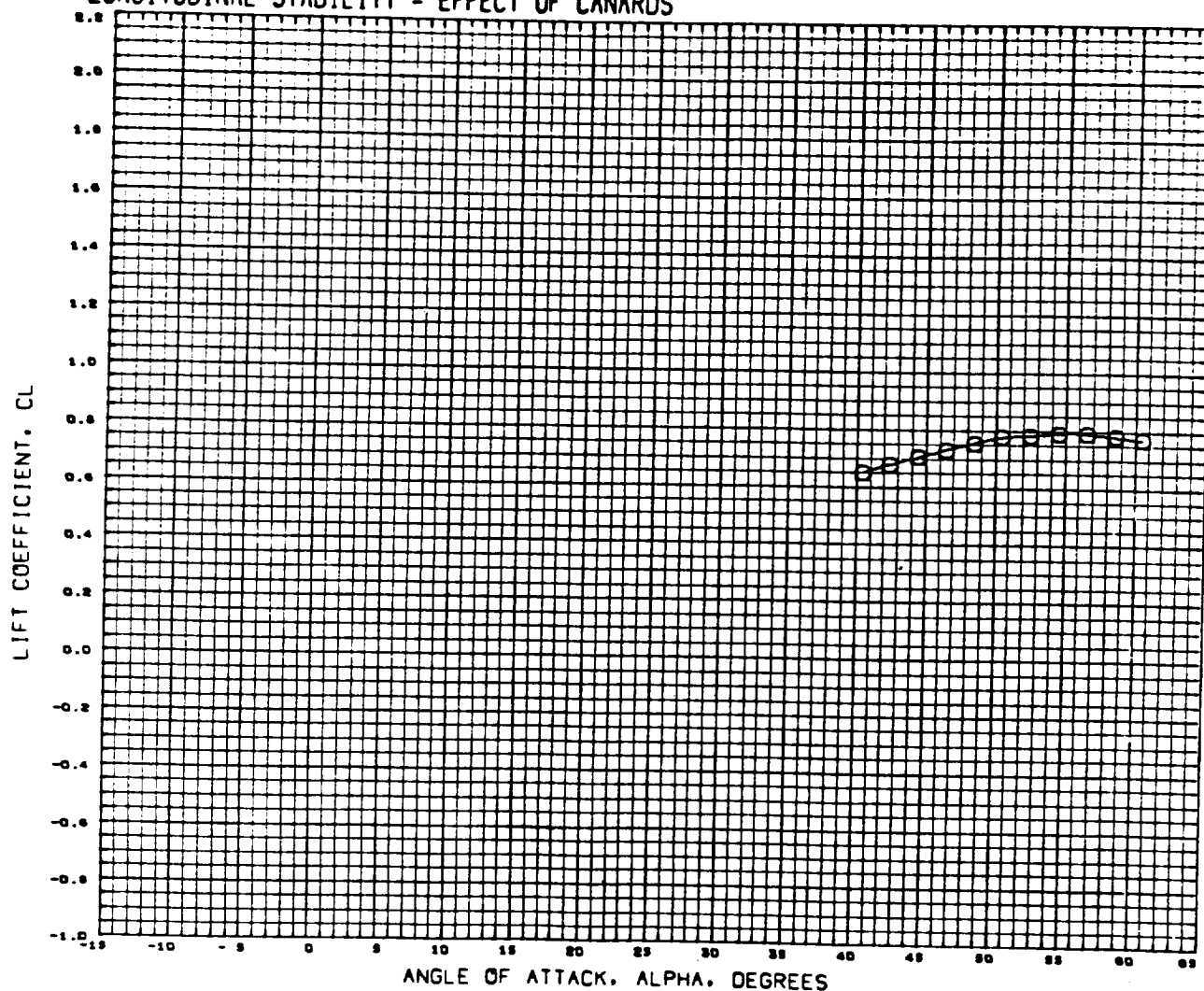


SYMBOL \bigcirc MACH 4.889 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 BREF 4.3000 IN.
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 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

LONGITUDINAL STABILITY - EFFECT OF CANARDS



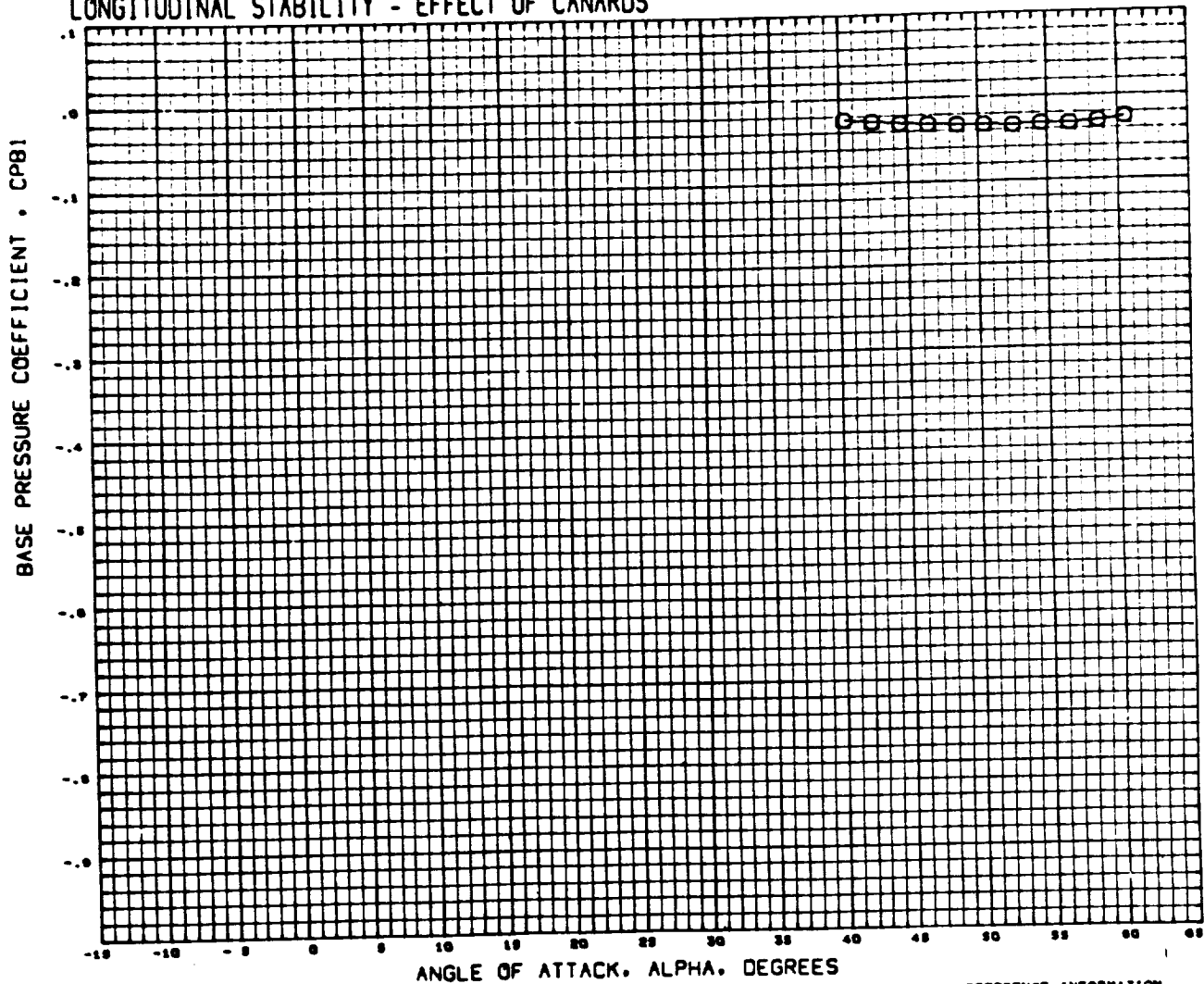
SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000

PARAMETRIC VALUES DATA HIST. CODE *E

REFERENCE INFORMATION
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 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

M496-MSFC AR11981-3 MODEL B2C12 (E3805K) 06 SEP 72 PAGE 727

LONGITUDINAL STABILITY - EFFECT OF CANARDS



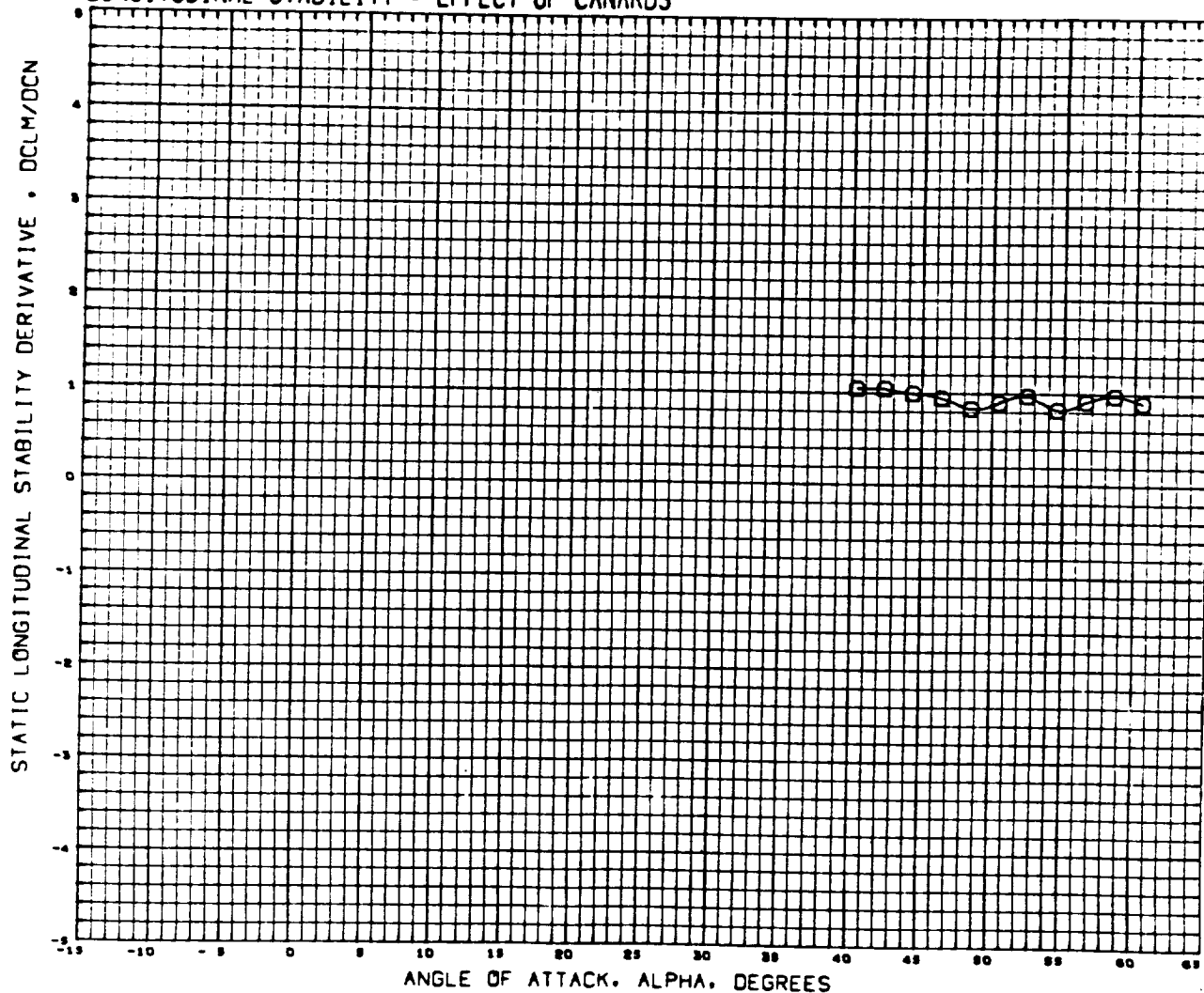
SYMBOL MACH BETA PARAMETRIC VALUES
 O 4.959 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA MIST. CODE 0E

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 00.000

DATA HIST. CODE 02

REFERENCE INFORMATION
 BREF 4.0223 50. IN.
 LREF 1.3360 IN.
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 SCALE 0.0023

M496-MSFC

AR11981-3

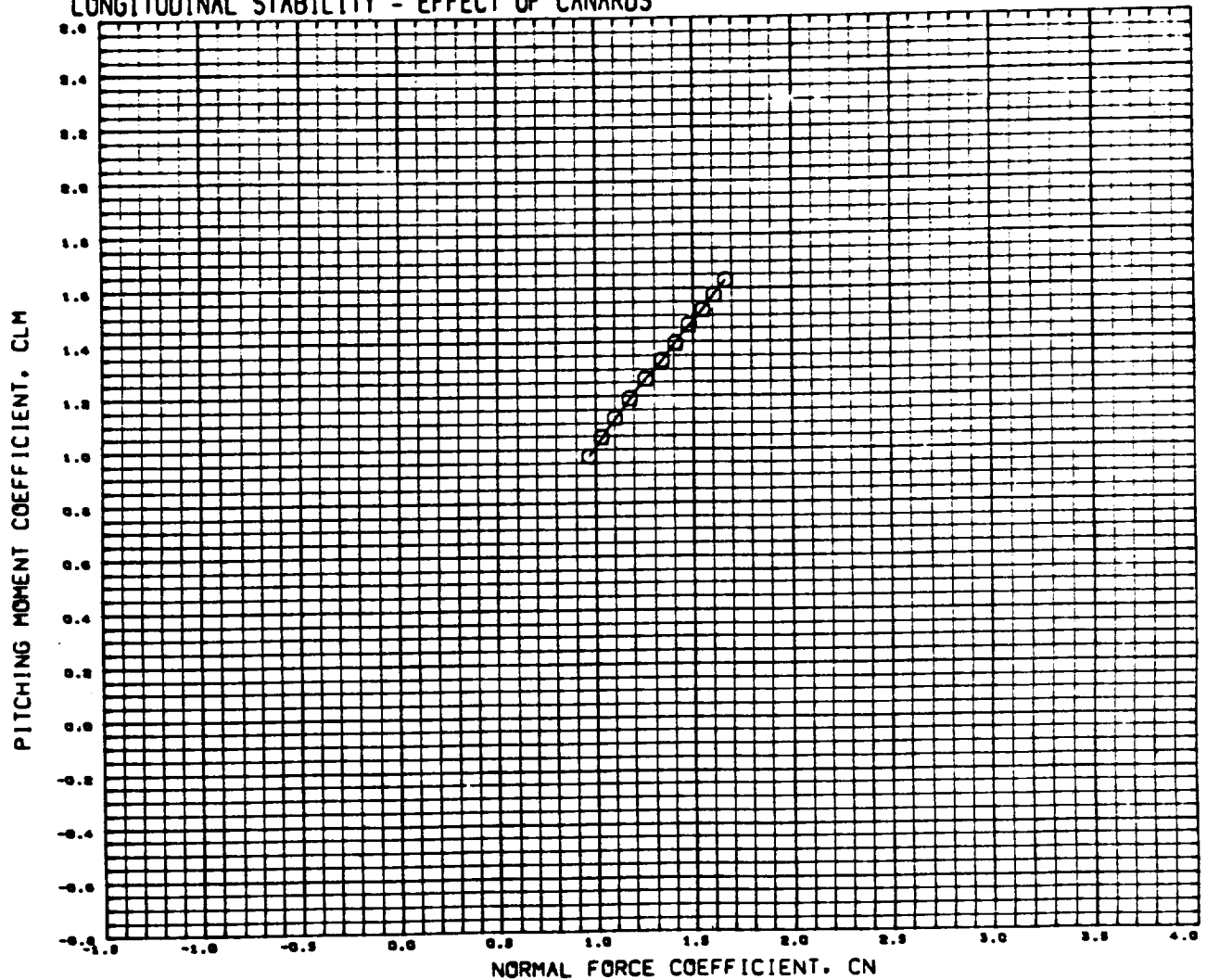
MODEL

B2C12

(E3805K) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

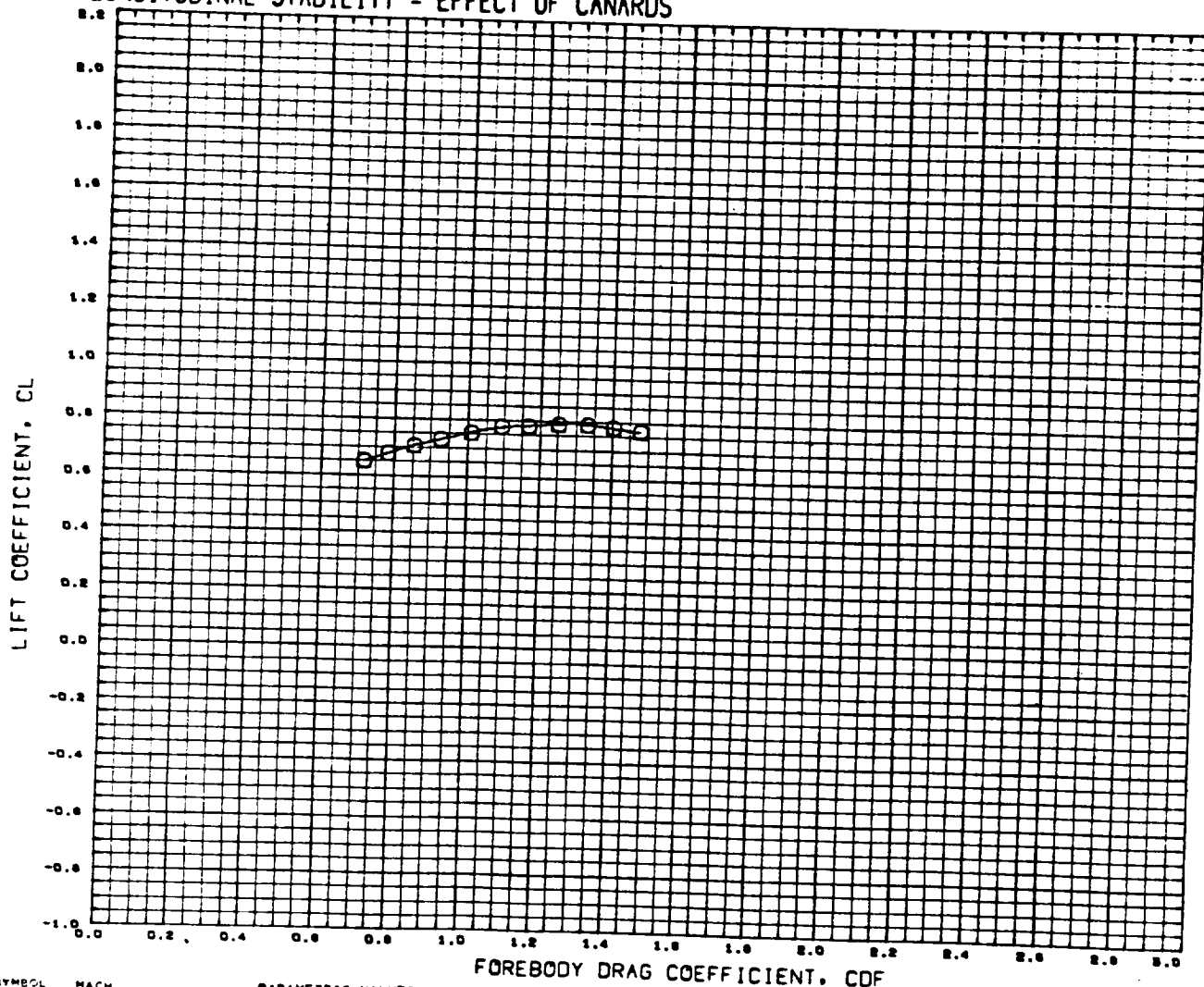


SYMBOL ☐ MACH 4.000 BEYA 0.000
 PARAMETRIC VALUES 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREP 1.5360 IN.
 GREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE WE

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH 4.959 BETA 0.000 CANARD - 60.000

FOREBODY DRAG COEFFICIENT, CDF

REFERENCE INFORMATION
 SREF 4.6225 50. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC

AR11981-3

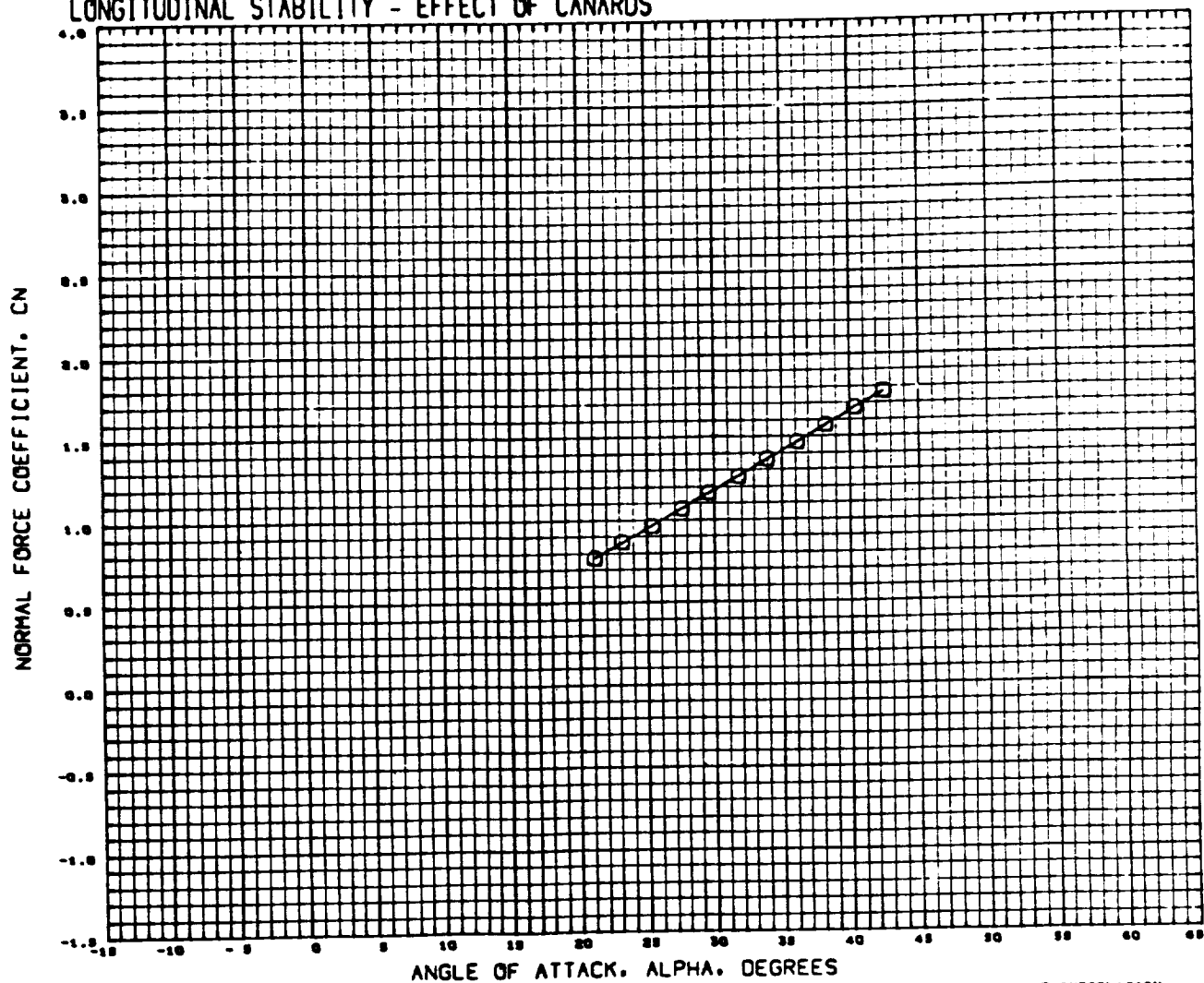
MODEL

B2C12

(E3805K) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

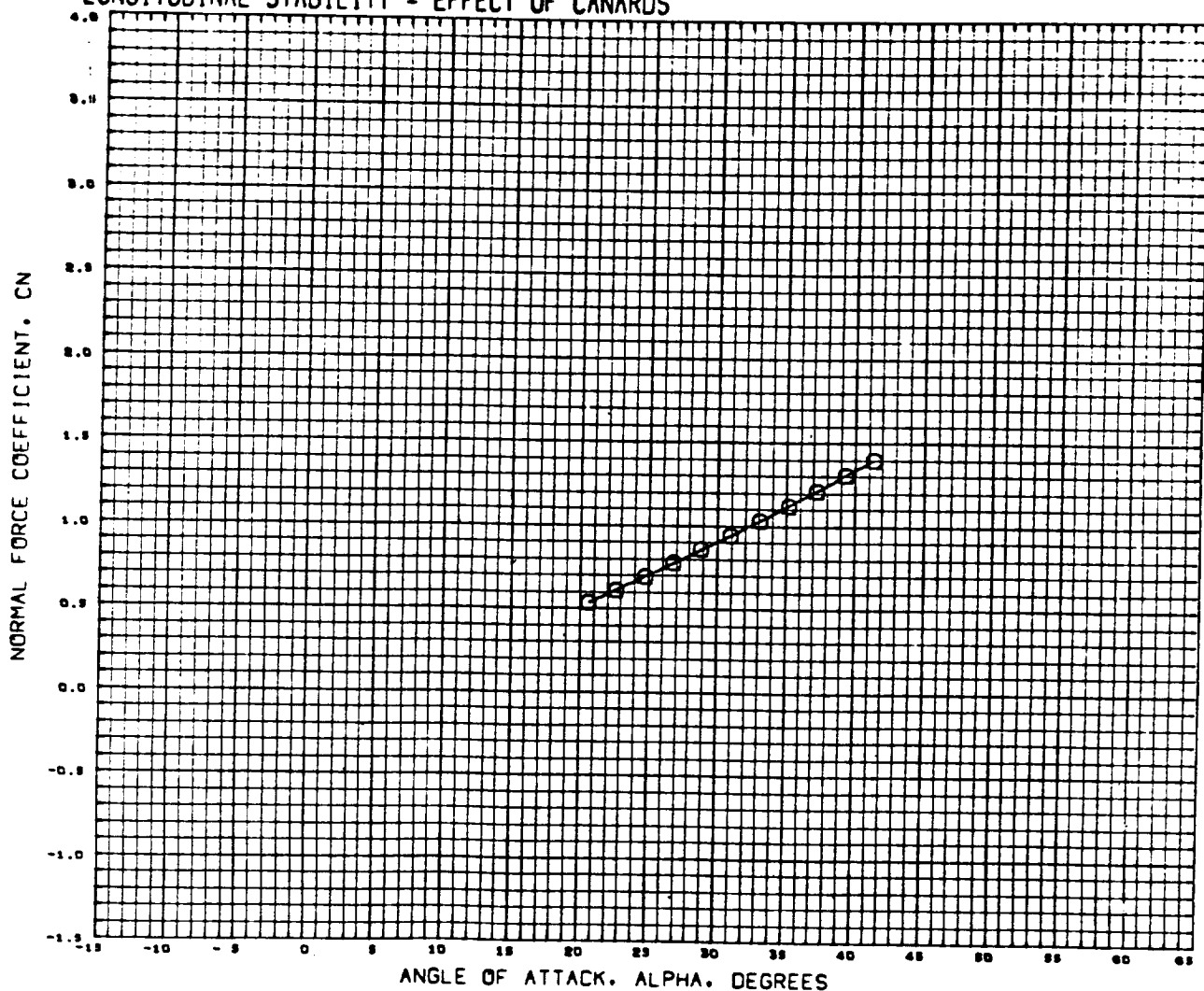


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREP	LREP	YREP
○	1.048	0.000	0.000	0.000	-40.000	7.7005	3.1700	4.3920
		DER						
		ALLCON						
						2.4000	0.0000	0.0000
						0.0000	0.0000	0.0029

DATA HIST. CODE M=K

M496-MSFC AR11981-3 MODEL W982C12V1 (E3826M) 06 SEP 72 PAGE 732

LONGITUDINAL STABILITY - EFFECT OF CANARDS



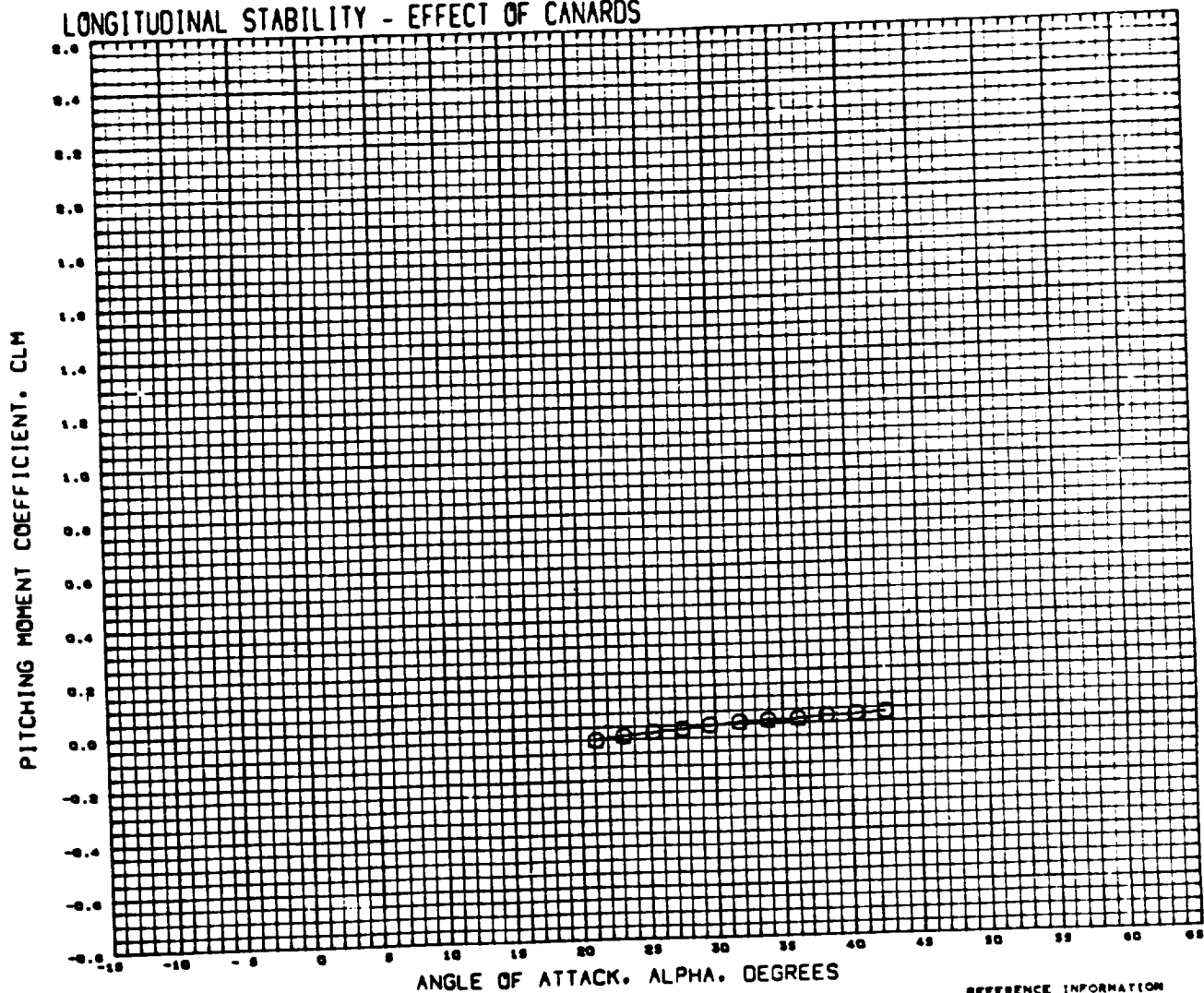
SYMBOL \bigcirc MACH 3.480
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 40.000

DATA HIST. CODE M+E

REFERENCE INFORMATION
 SREF 7.7005 SQ. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
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 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3826M) 06 SEP 72 PAGE 733

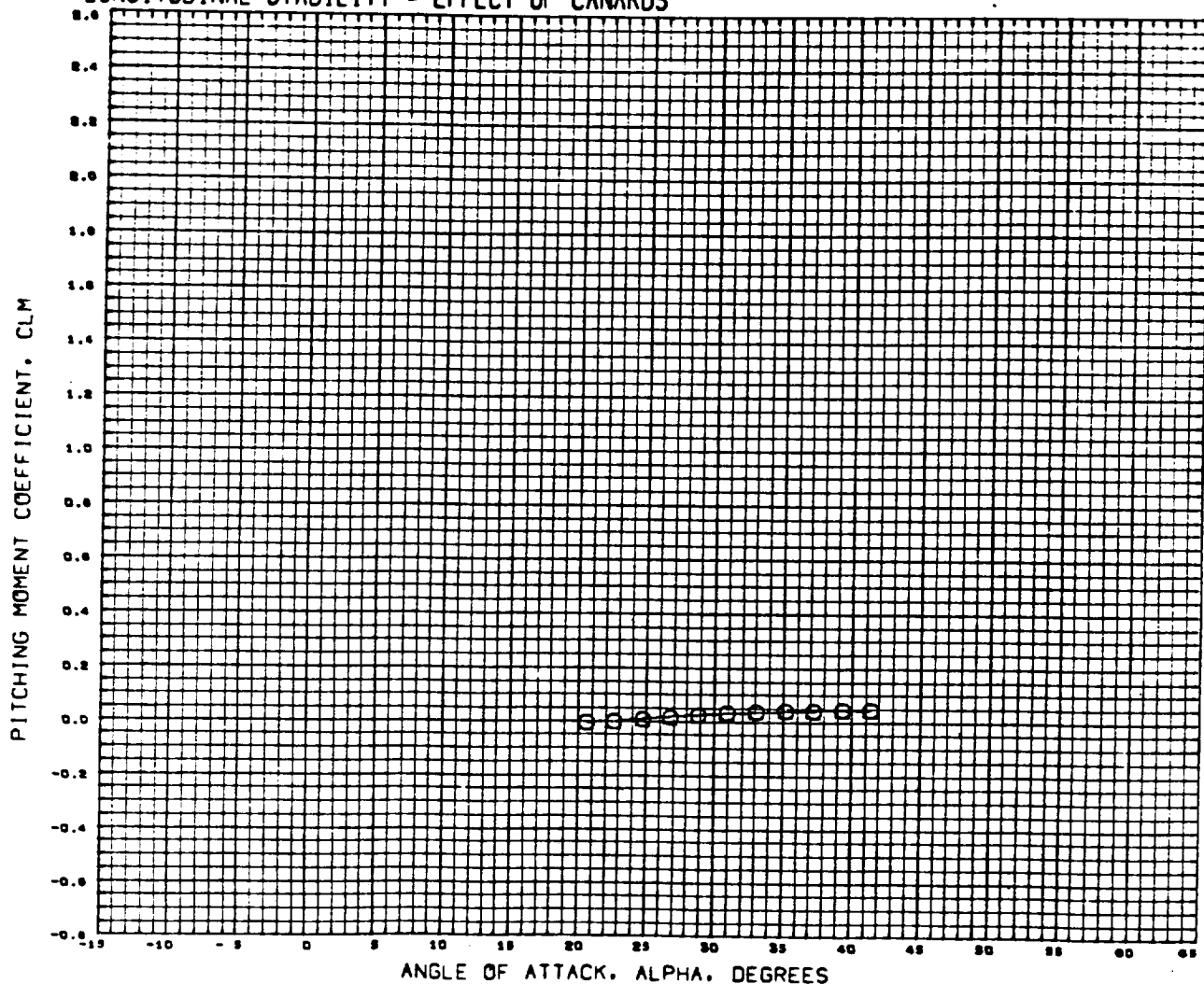
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREP	LREP	BREP
○	1.048	0.000	0.000	0.000	-40.000	7.7005	3.1700	4.3920
		AILRON				XMRP	YMRP	ZMRP
						0.0000	0.0000	0.0000
						SCALE		
						0.0025		

DATA HIST. CODE M4E
M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3826M) 06 SEP 72 PAGE 734

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH
O 3.480

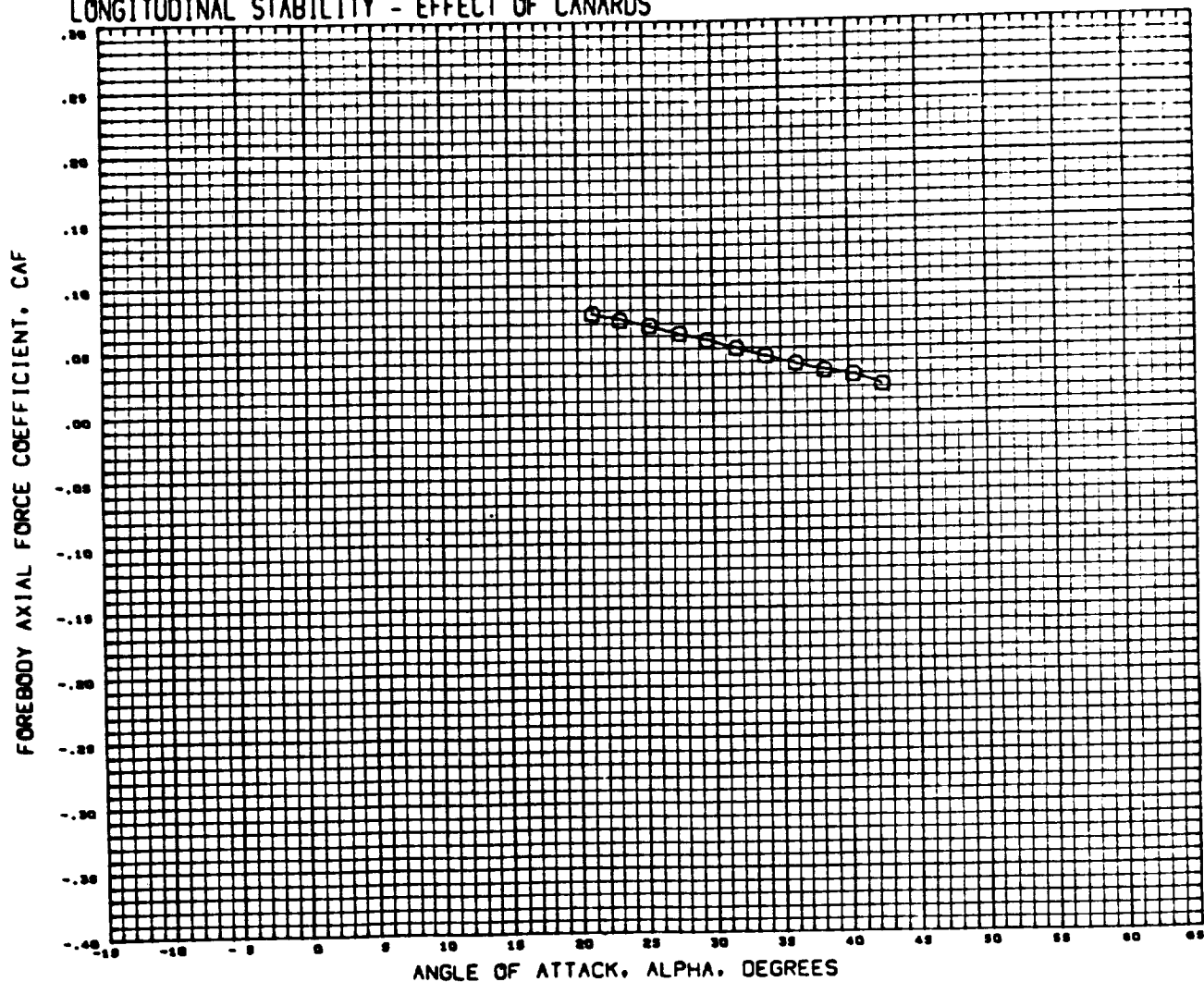
PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
SREP	7.7005	SQ. IN.
LREP	3.1700	IN.
BREP	4.3820	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE M+E

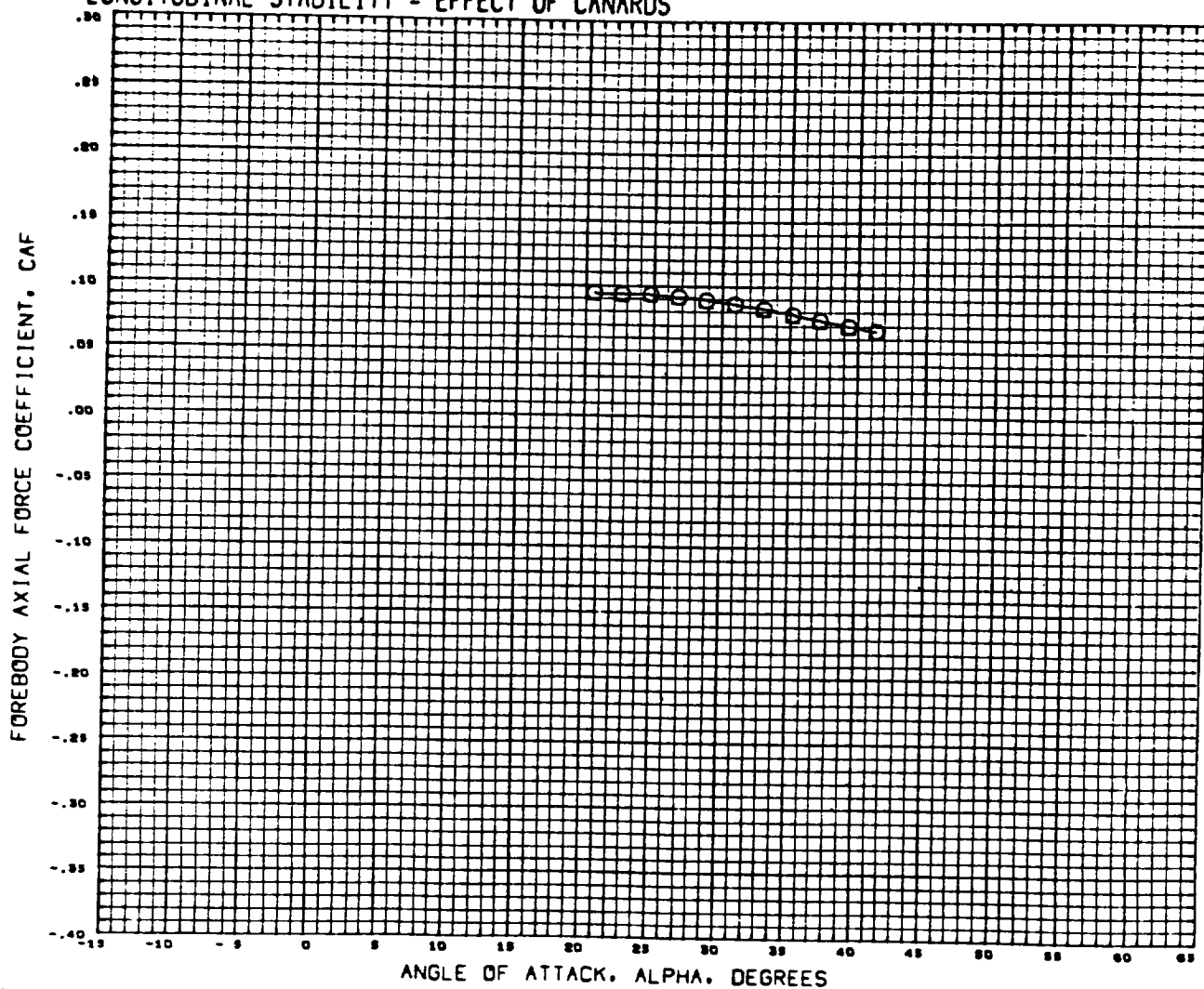
M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3826M) 06 SEP 72 PAGE 735

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREP	LREP	BREP
□	1.948	0.000	0.000	0.000	- 40.000	7.7003	3.1700	4.3920
		DER				XHRP	YHRP	ZHRP
		0.000				2.4000	0.0000	0.0000
		AILRON				SCALE		
		0.000				0.0029		

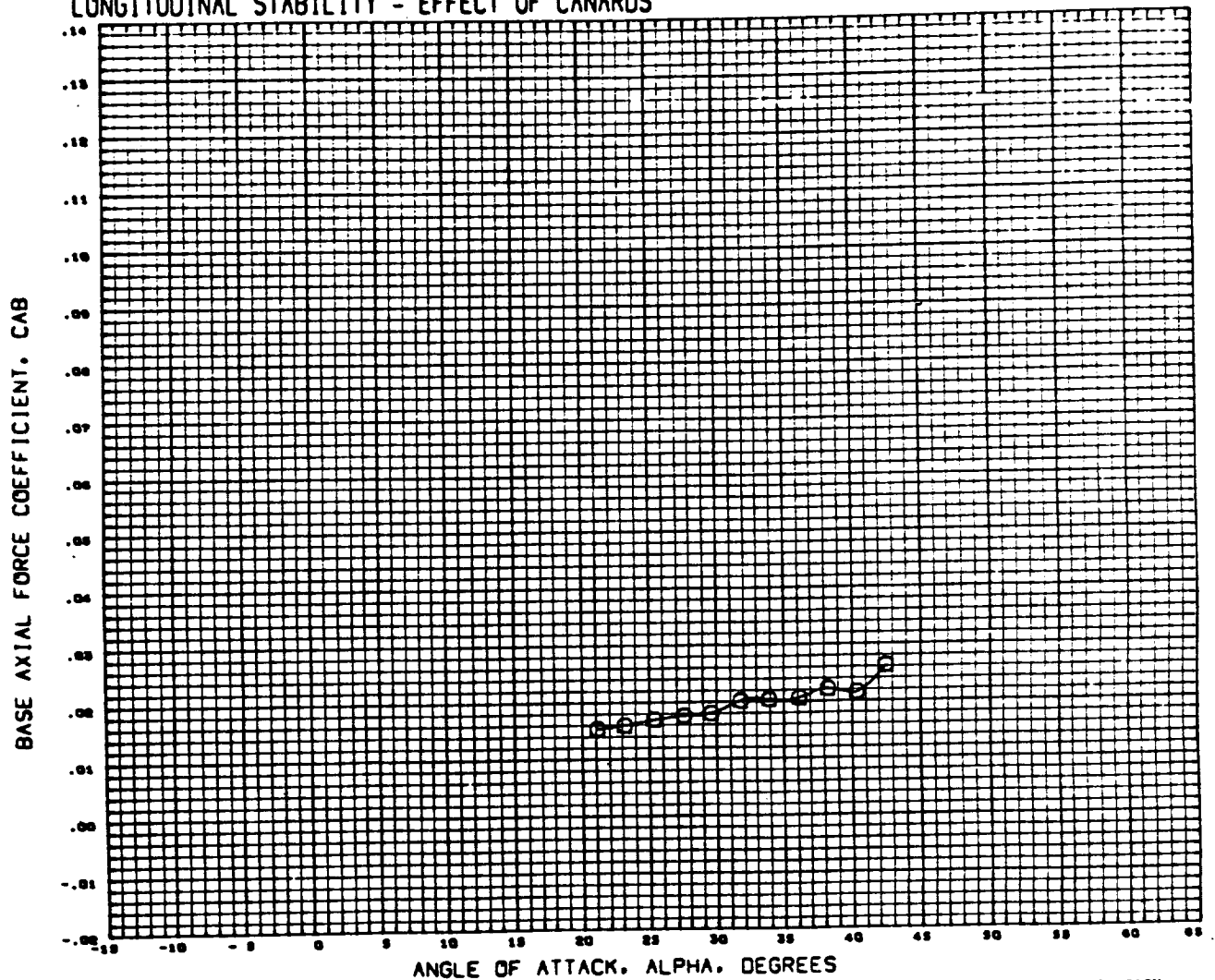
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
O		3.480		BETA	0.000	DEL	0.000	SREF	7.7005	SQ. IN.	
				DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.	
				ATTORN	0.000	CANARD	- 40.000	SREF	4.3920	IN.	
								XMRP	2.4000	IN.	
								YMRP	0.0000	IN.	
								ZMRP	0.0000	IN.	
								SCALE	0.0025		

DATA HIST. CODE	M=E										
M496-MSFC	AR11981-3	MODEL	W9B2C12V1	(E3826M)	06 SEP 72	PAGE	737				

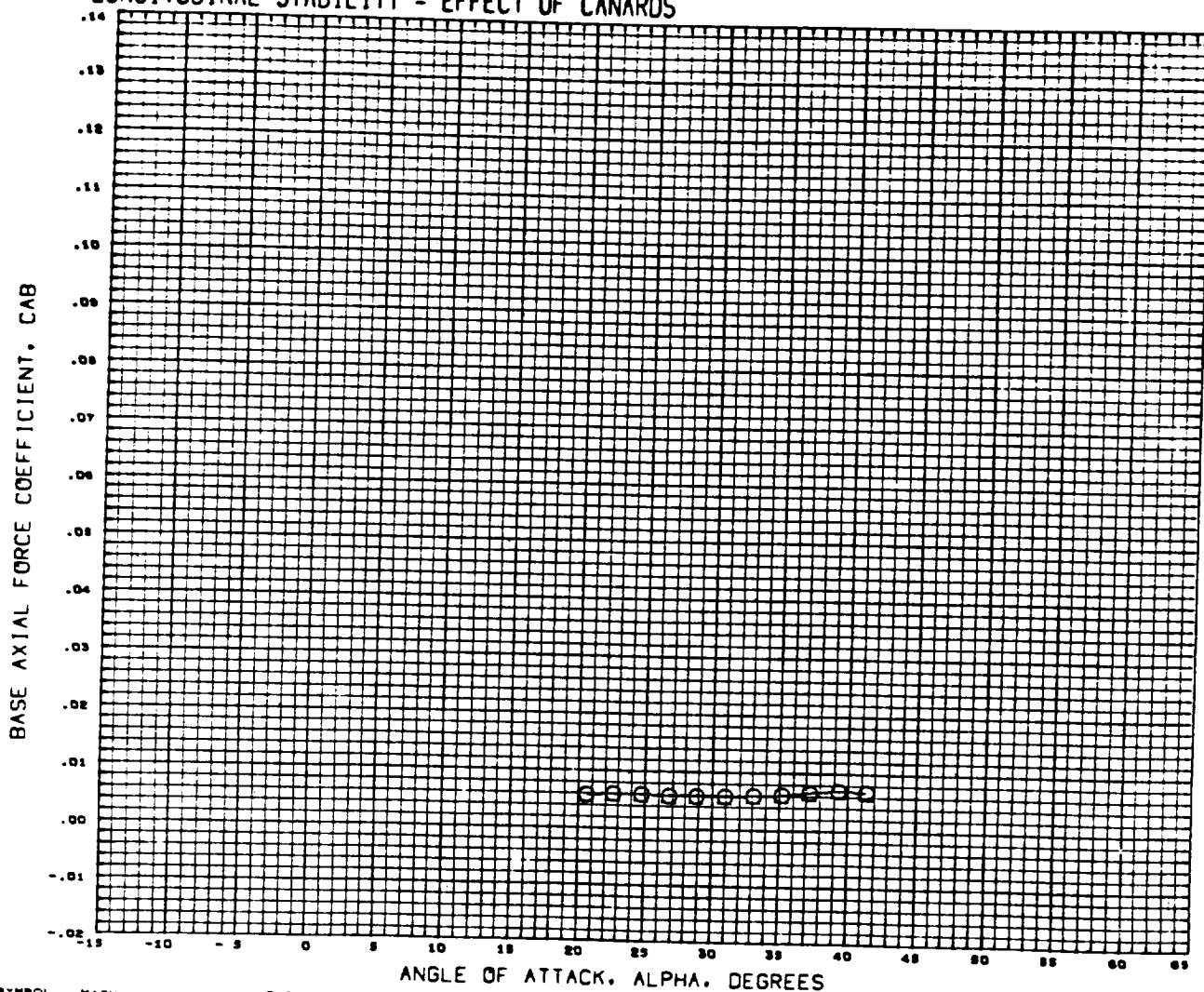
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SRP	LRP	IN.
○	1.940	0.000	0.000	0.000	-40.000	7.7005	3.1700	IN.
		0.000	0.000	0.000		4.3920	2.4000	IN.
		0.000	0.000	0.000		0.0000	0.0000	IN.
						0.0000	0.0000	IN.
						0.0025		

DATA HIST. CODE MPE

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH
O 3.480

PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLON	0.000	CANARD	- 40.000

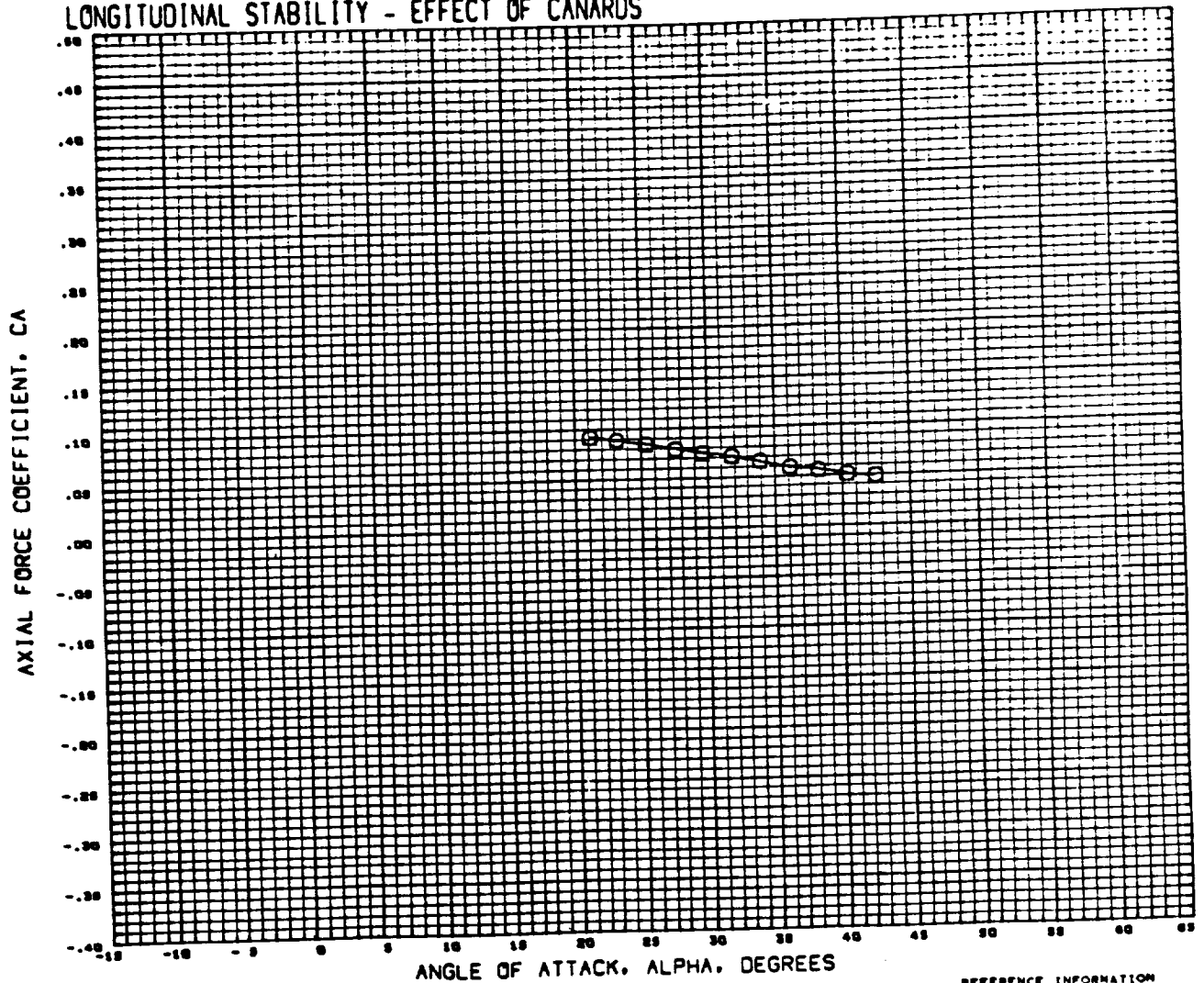
REFERENCE INFORMATION

SREF	7.7005	80. IN.
LREF	5.1700	IN.
SRFP	4.3920	IN.
XRFP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE N=6

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREP	IN.	SG. IN.
○	1.948	0.000	0.000	0.000	-40.000	LREP	3.1700	IN.
		DER	0.000	0.000		SREP	4.3920	IN.
		ATLROM	0.000			XMRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	IN.

DATA HIST. CODE NOE

M496-MSFC

AR11981-3

MODEL

W9B2C12V1

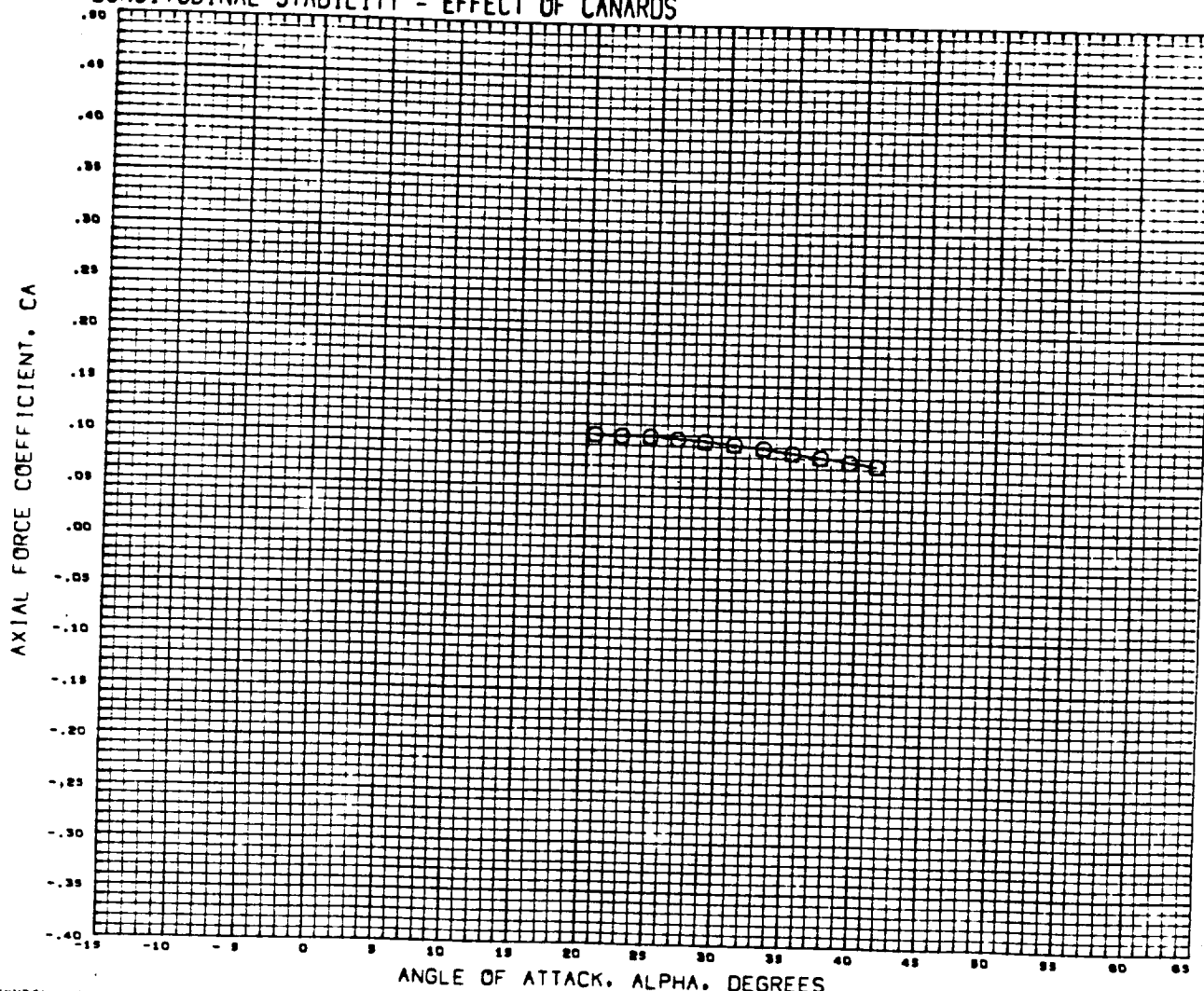
(E3826M)

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740

LONGITUDINAL STABILITY - EFFECT OF CANARDS



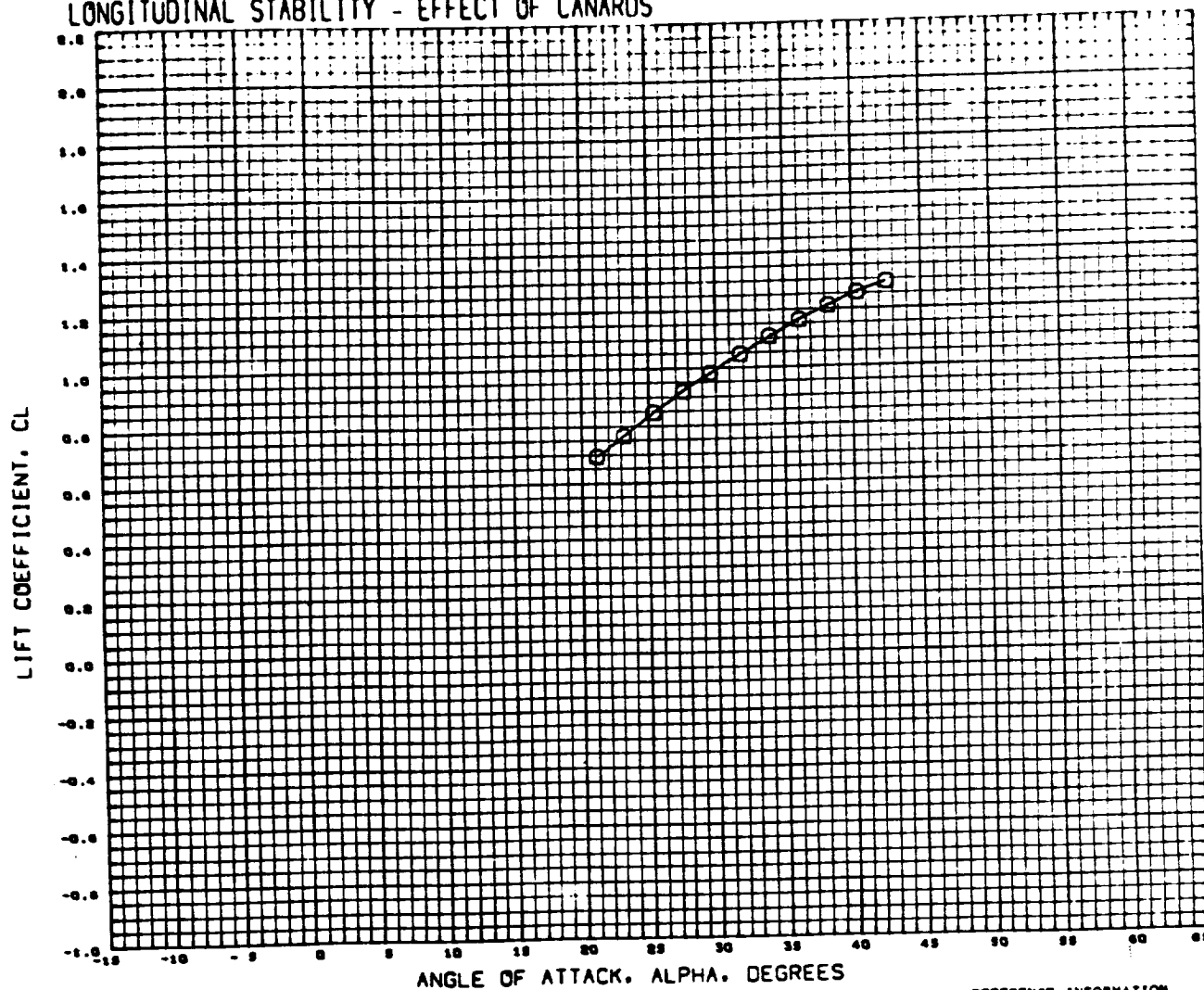
SYMBOL	MACH	PARAMETRIC VALUES			
○	3.480	BETA	0.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
SREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE M&E

M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3826M) 06 SEP 72 PAGE 741

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION	
O		1.948		BETA	0.000	DEL	0.000	SREP	7.7055
				DER	0.000	ELEVTR	0.000	LREP	3.1700
				ATLRON	0.000	CANARD	-40.000	SREP	4.3920
								THRP	2.4000
								THRP	0.0000
								THRP	0.0000
								SCALE	0.0025

DATA HIST. CODE M#E

M496-MSFC

AR11981-3

MODEL

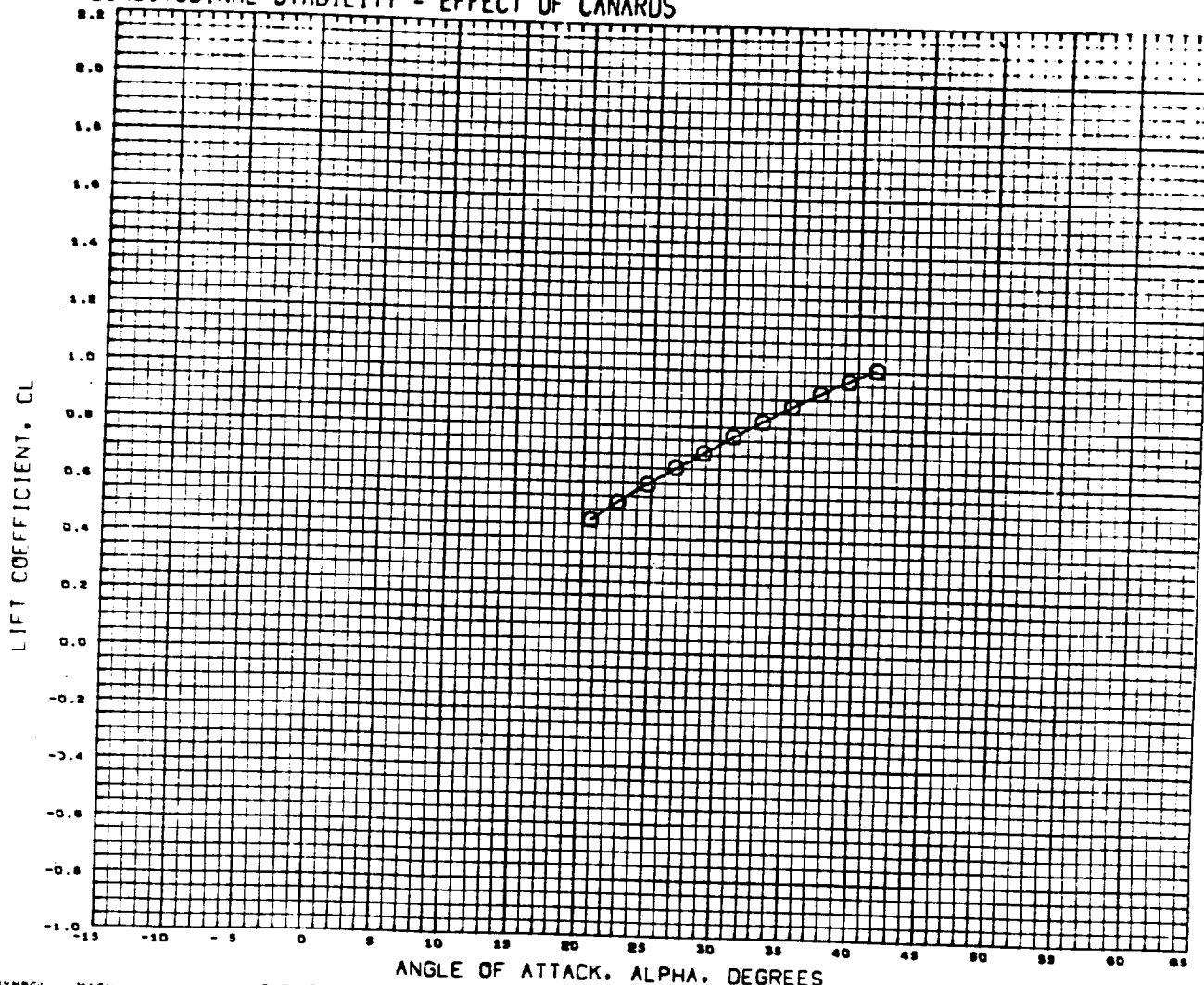
W9B2C12V1

(E3826M)

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

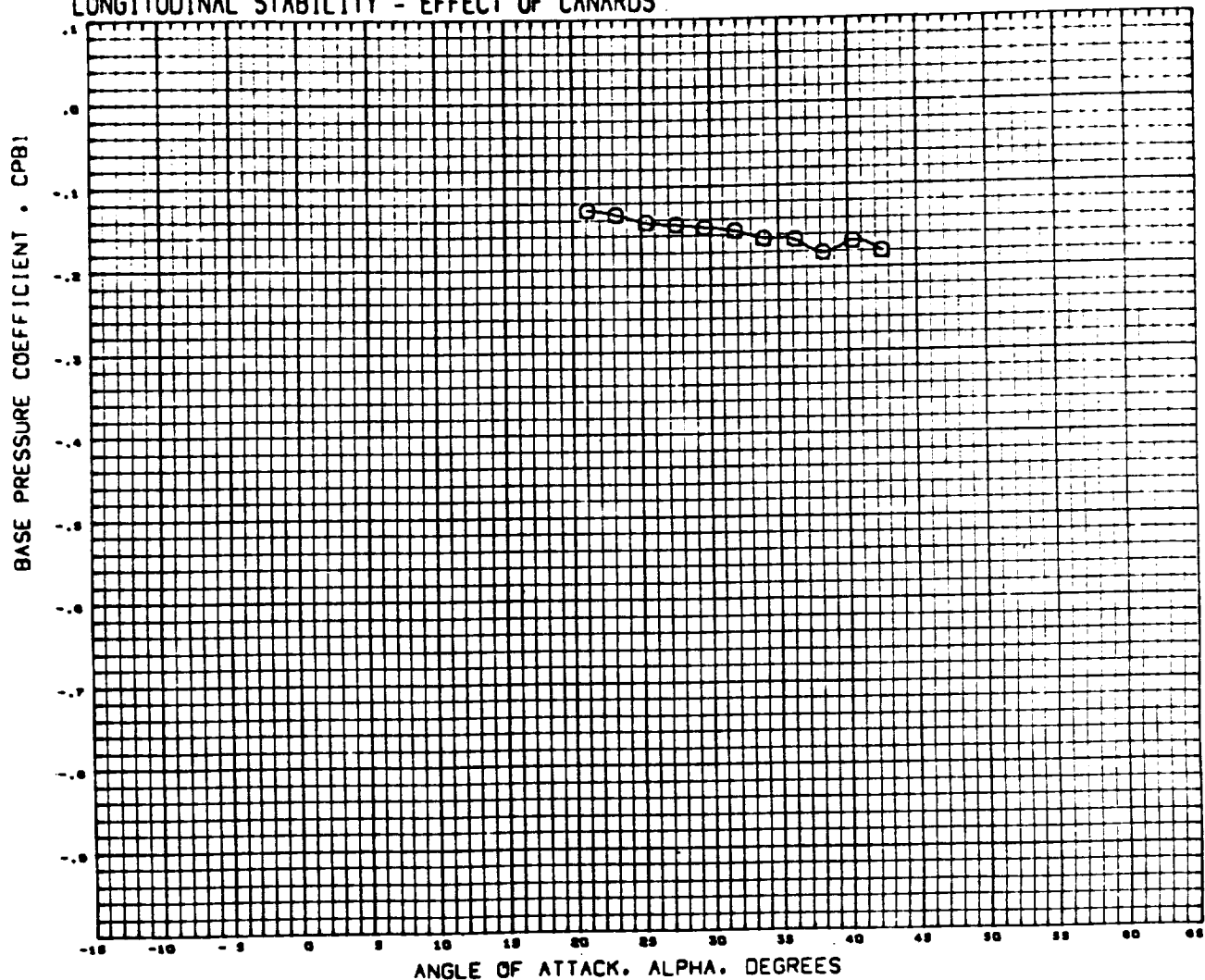


SYMBOL \bigcirc MACH 3.480
 PARAMETRIC VALUES
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 7.7005 80. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 ZMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

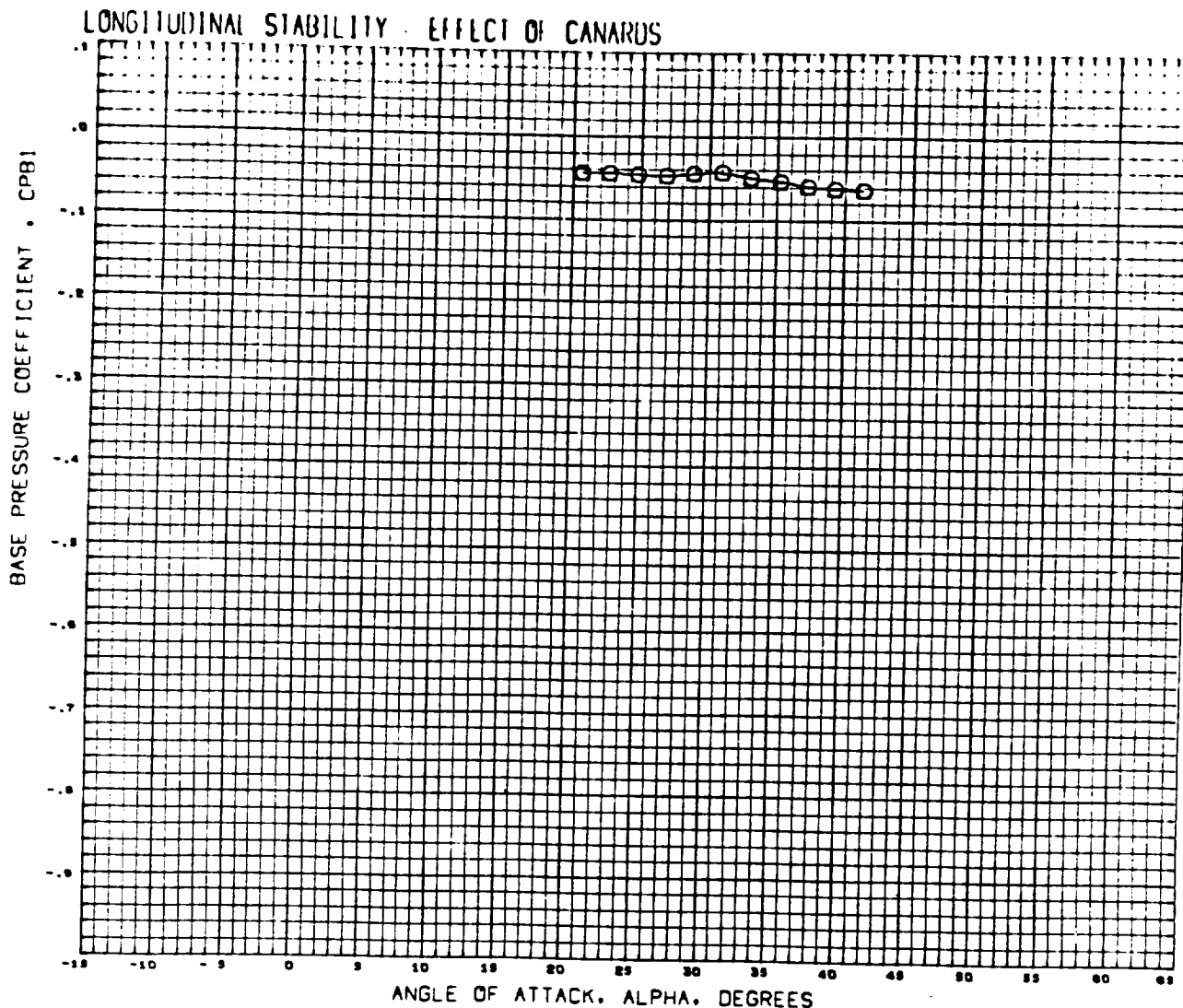
DATA HIST. CODE M&E

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL ○	MACH 1.948	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA 0.000	DEL 0.000	SREF 7.7005	SG (IN.) 53. (IN.)		
		DER 0.000	ELEVTR 0.000	LREF 3.1700	IN.		
		ATLRON 0.000	CANARD - 40.000	BREF 4.3920	IN.		
				XMRP 2.4000	IN.		
				YMRP 0.0000	IN.		
				ZMRP 0.0000	IN.		
				SCALE 0.0025			

DATA HIST. CODE	M+E						
M496-MSFC	AR1198I-3	MODEL	W982C12V1	(E3826M)	06 SEP 72	PAGE	744



SYMBOL MACH
○ 3.480

PARAMETRIC VALUES
BETA 0.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATLRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
BREF 7.7005 50. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XWRP 2.4000 IN.
YWRP 0.0000 IN.
ZWRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE M=0

M496-MSFC

AR11981-3

MODEL

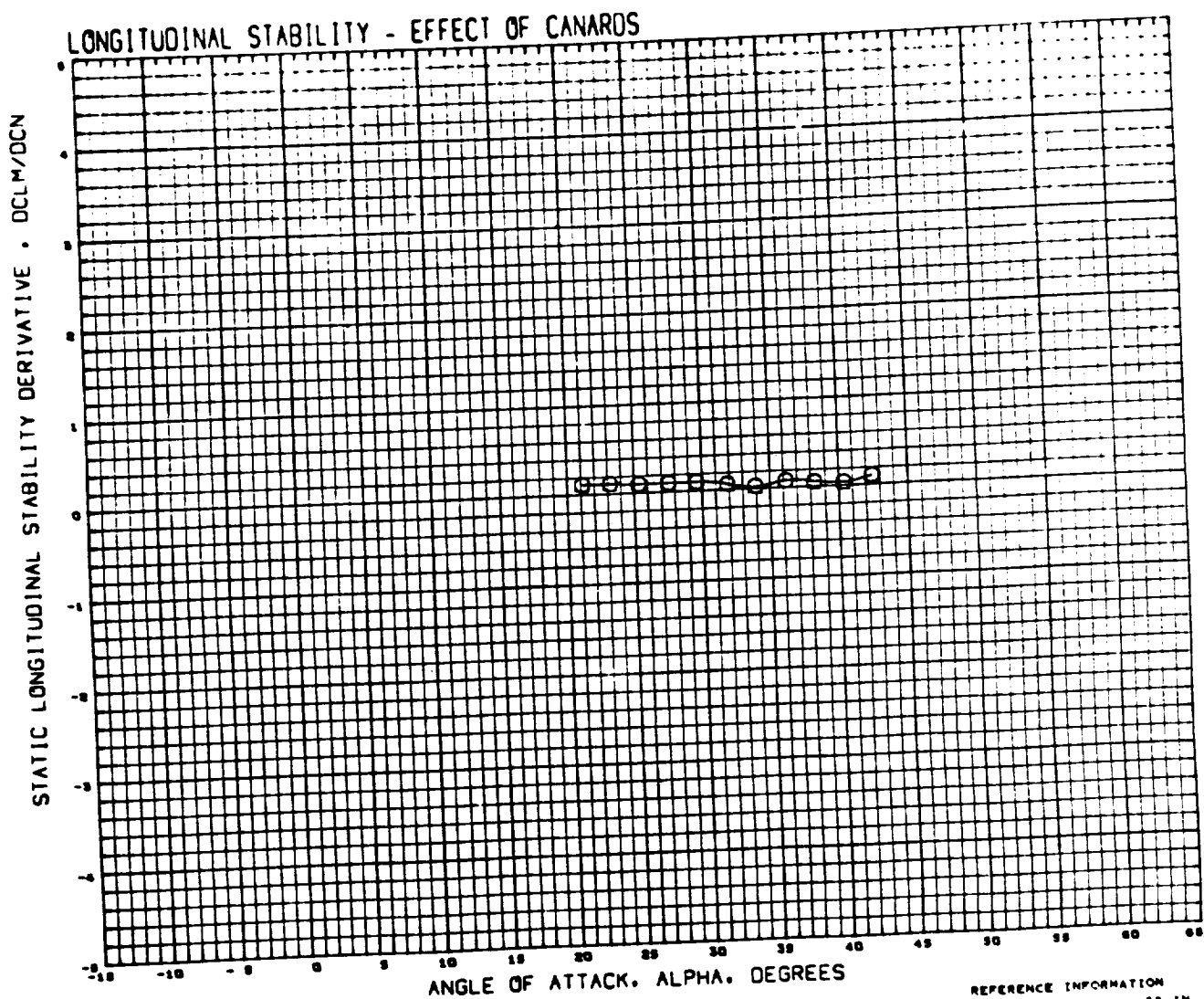
W9B2C12V1

(E3826M)

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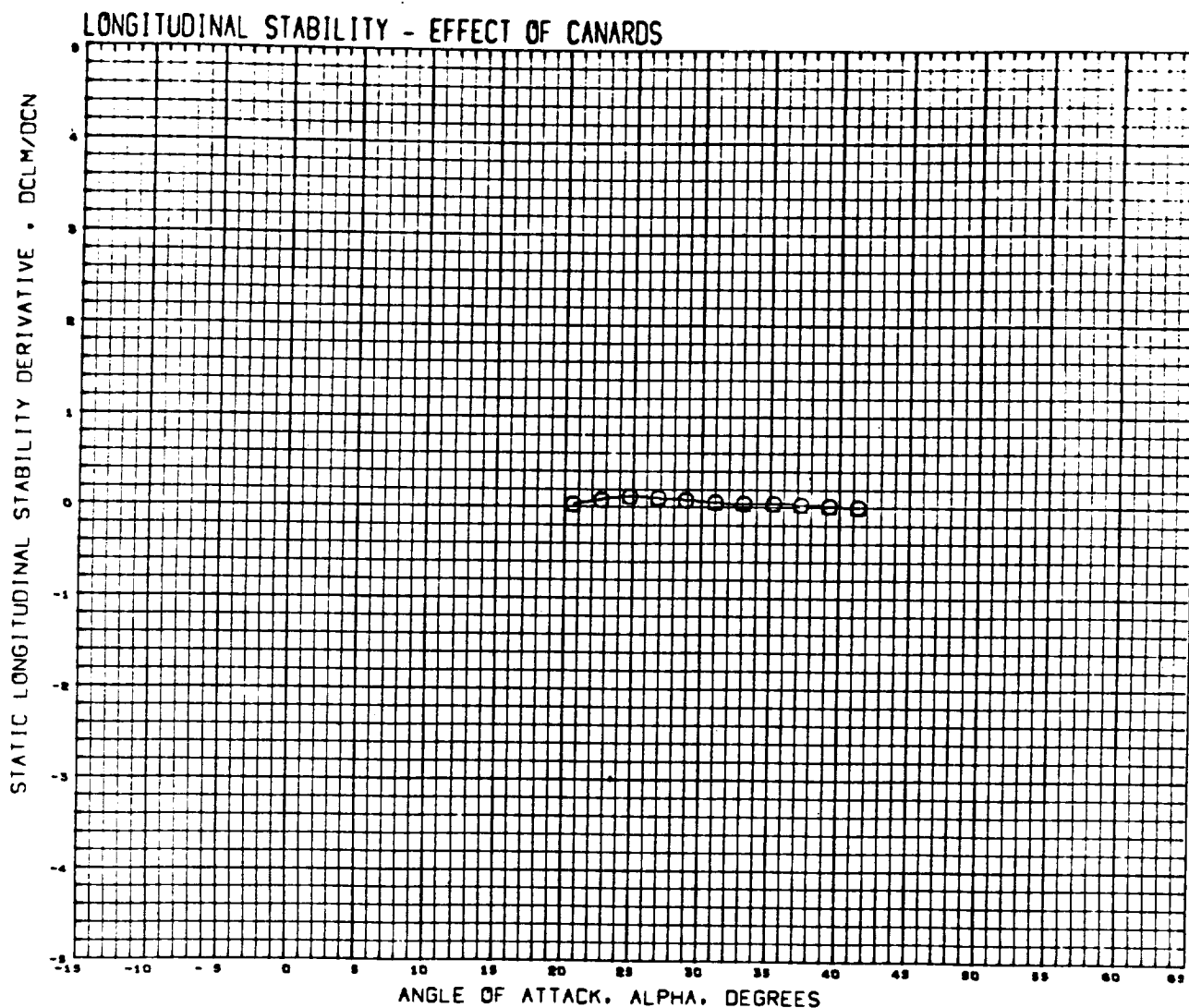
PAGE

745



SYMBOL ○	MACH	PARAMETRIC VALUES			
	1.948	BETA	0.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		ATLRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
SREP	7.7003	SQ. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	



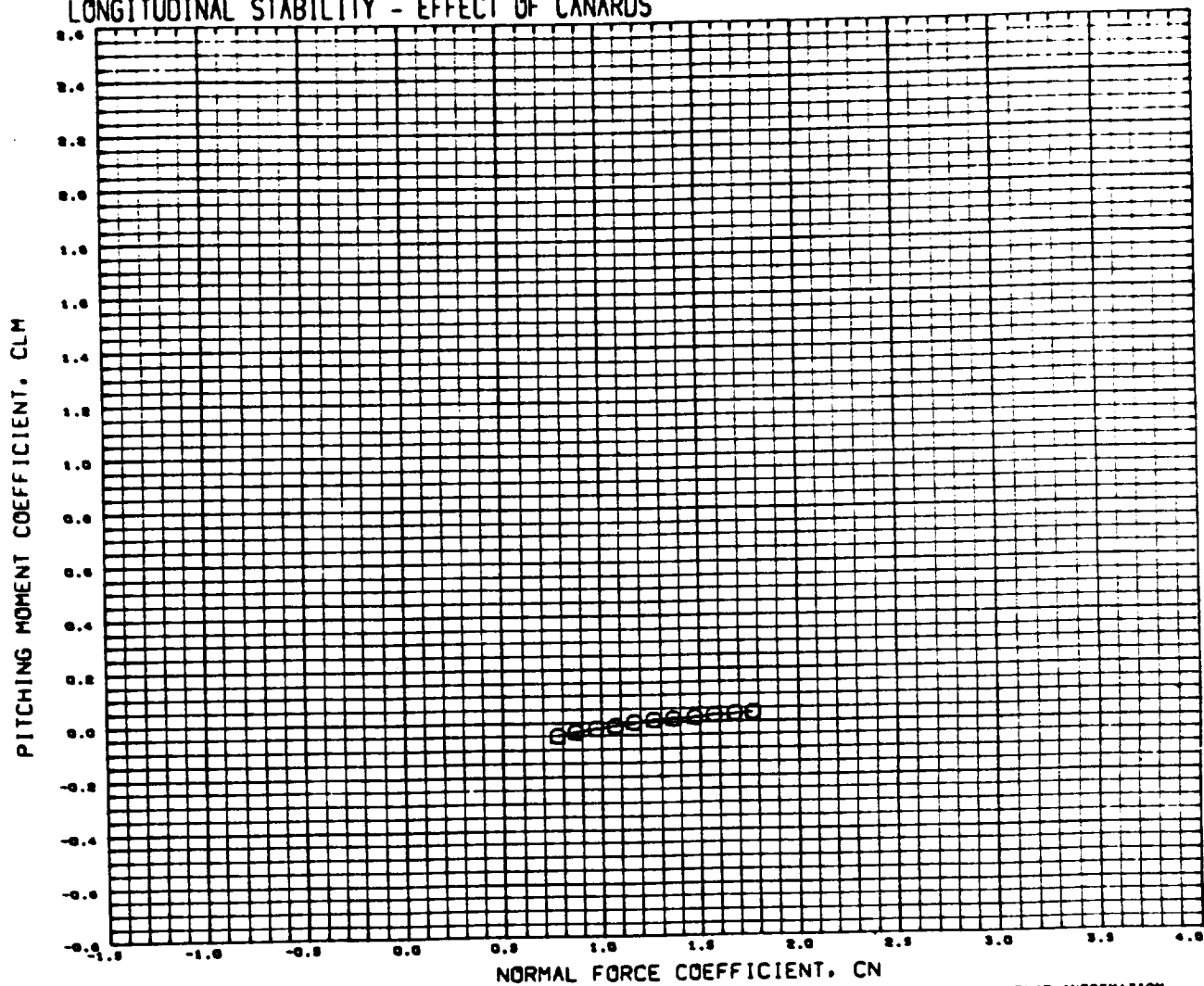
SYMBOL	MACH	PARAMETRIC VALUES			
○	3.480	BETA	0.000	DEL	0.000
		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
BREF	7.7005	30. IN.
LREF	3.1700	IN.
BREF	4.3920	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	IN.

DATA HIST. CODE NNE

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



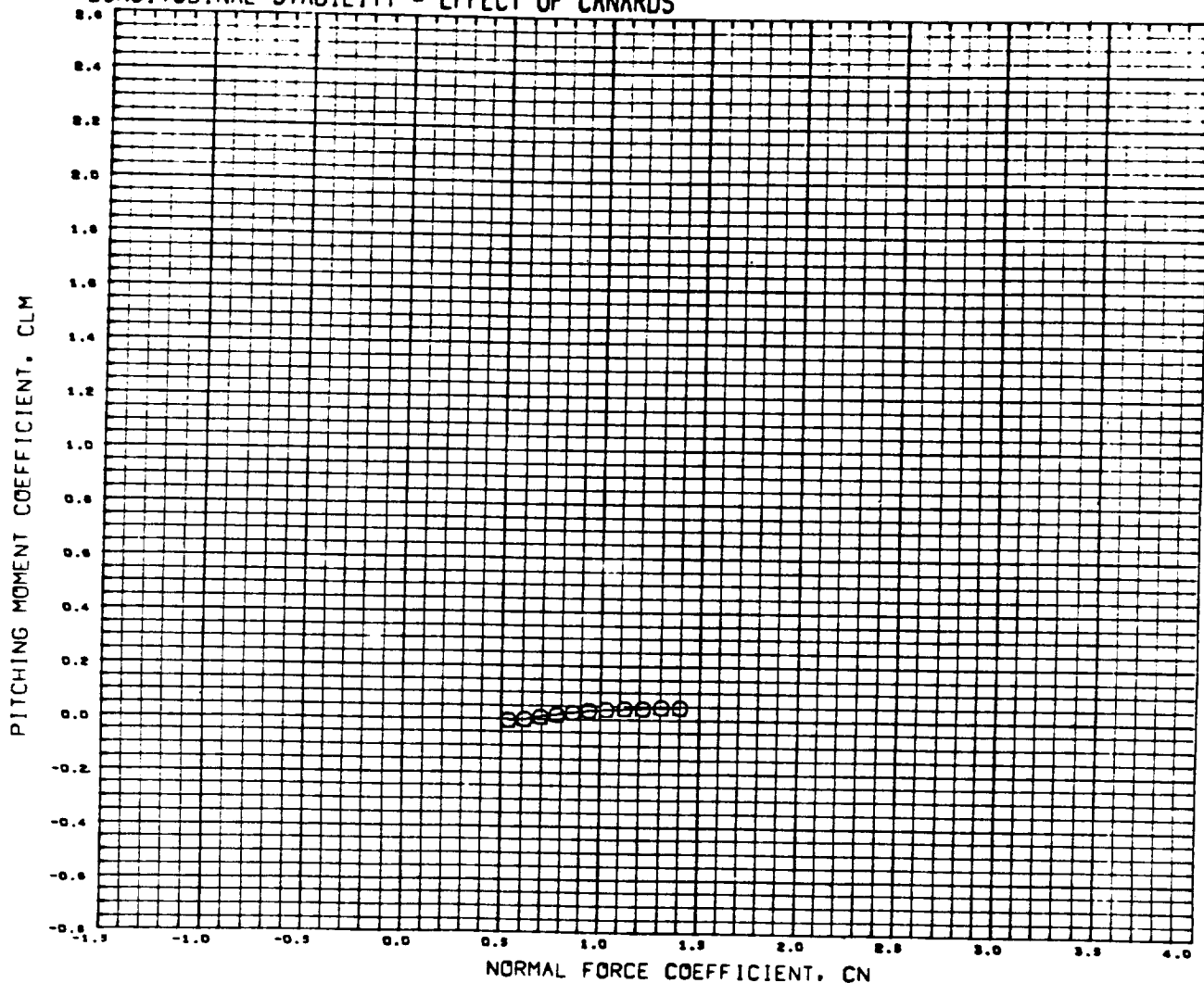
SYMBOL \bigcirc MACH 1.948
 PARAMETRIC VALUES
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
 SREF 7.7005 SQ. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE M=1

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

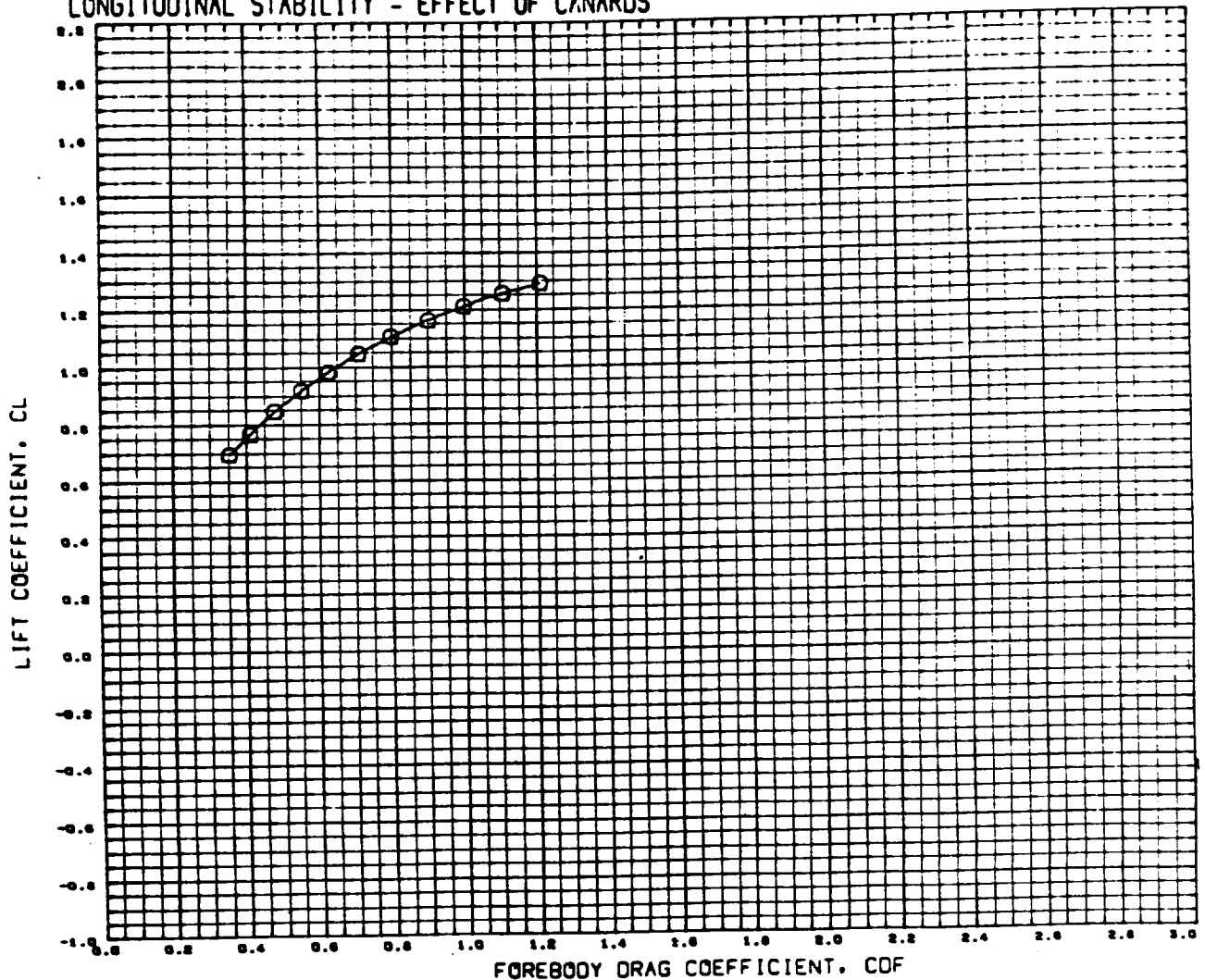


SYMBOL	MACH	PARAMETRIC VALUES			
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		DER	0.000	ELEVTR	0.000
		AILRON	0.000	CANARD	- 40.000

REFERENCE INFORMATION		
SREP	7.7005	53. IN.
LNRP	3.1700	IN.
SRFP	4.3920	IN.
XHRP	2.4000	IN.
YHRP	0.0000	IN.
ZHRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE H&E

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH PARAMETRIC VALUES
○ 1.940 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 AILRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
SRFP 7.7003 SQ. IN.
LRFP 3.1700 IN.
BRFP 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE H+E

M496-MSFC

AR11981-3

MODEL

W982C12V1

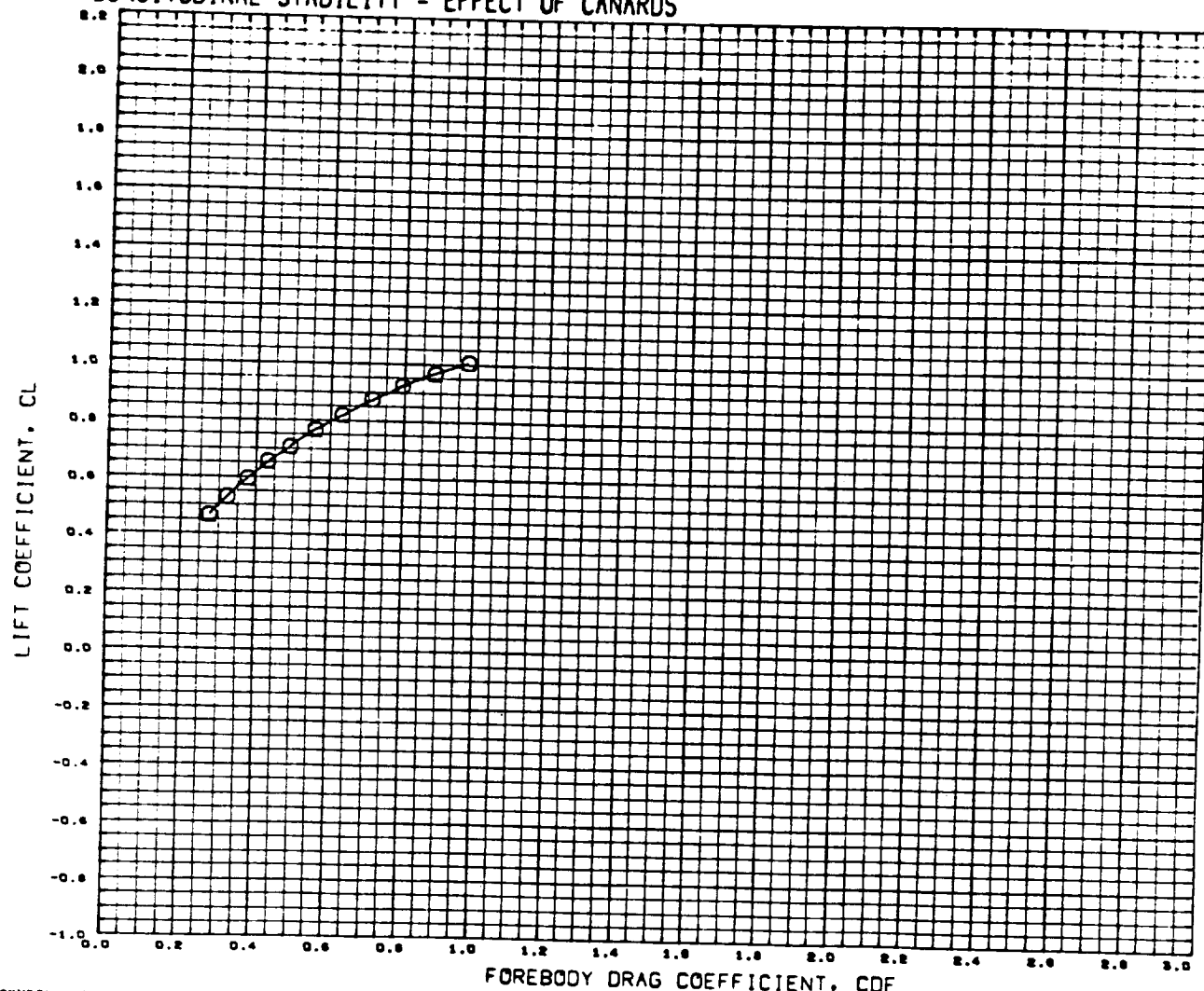
(E3826M)

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PAGE

750

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH
O 3.485

PARAMETRIC VALUES
BETA 0.000 DEL 0.000
DER 0.000 ELEVTR 0.000
AILRON 0.000 CANARD - 40.000

REFERENCE INFORMATION
SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
OREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0023

DATA HIST. CODE M#E

M496-MSFC

AR11981-3

MODEL

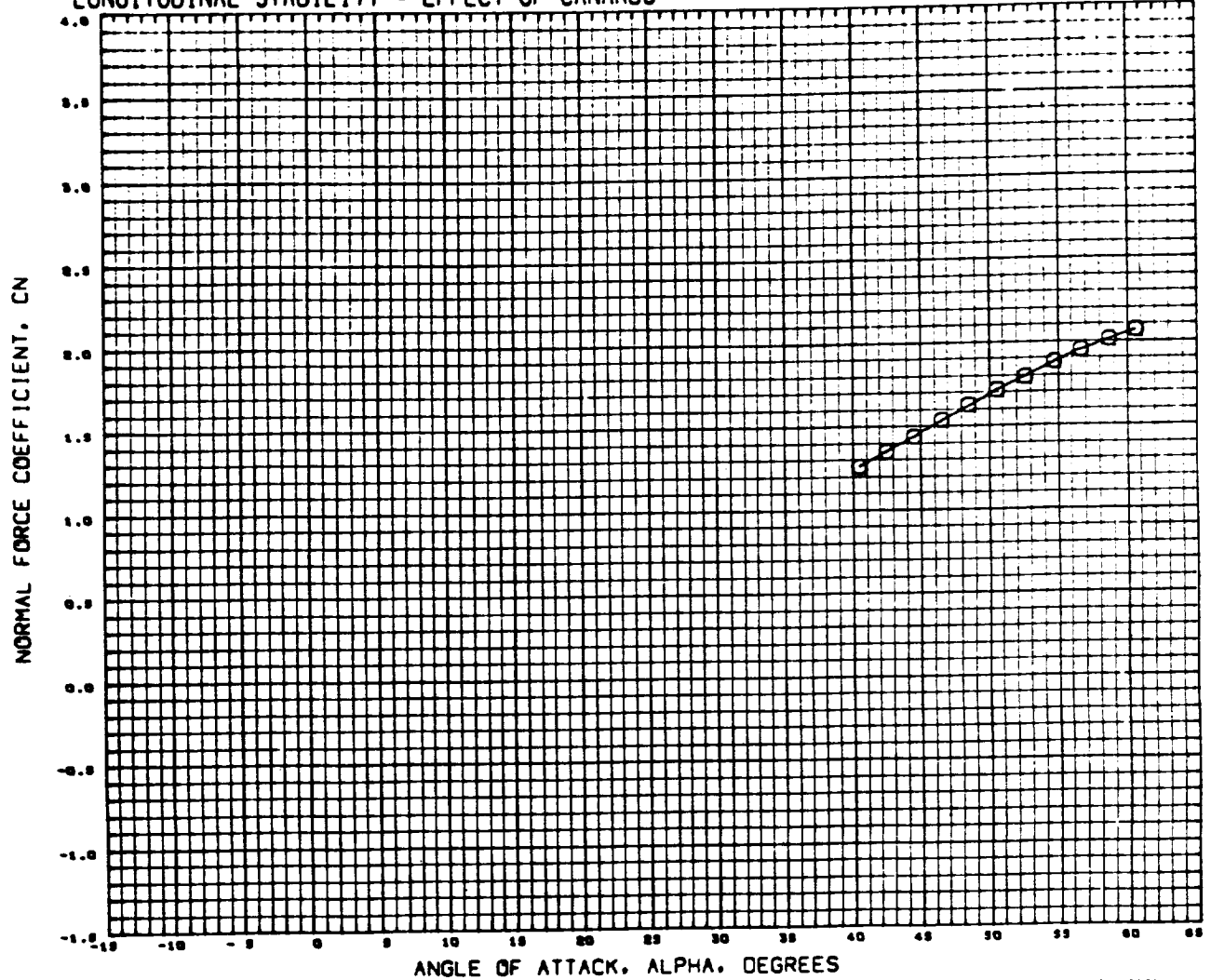
W982C12V1

(E3826M)

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

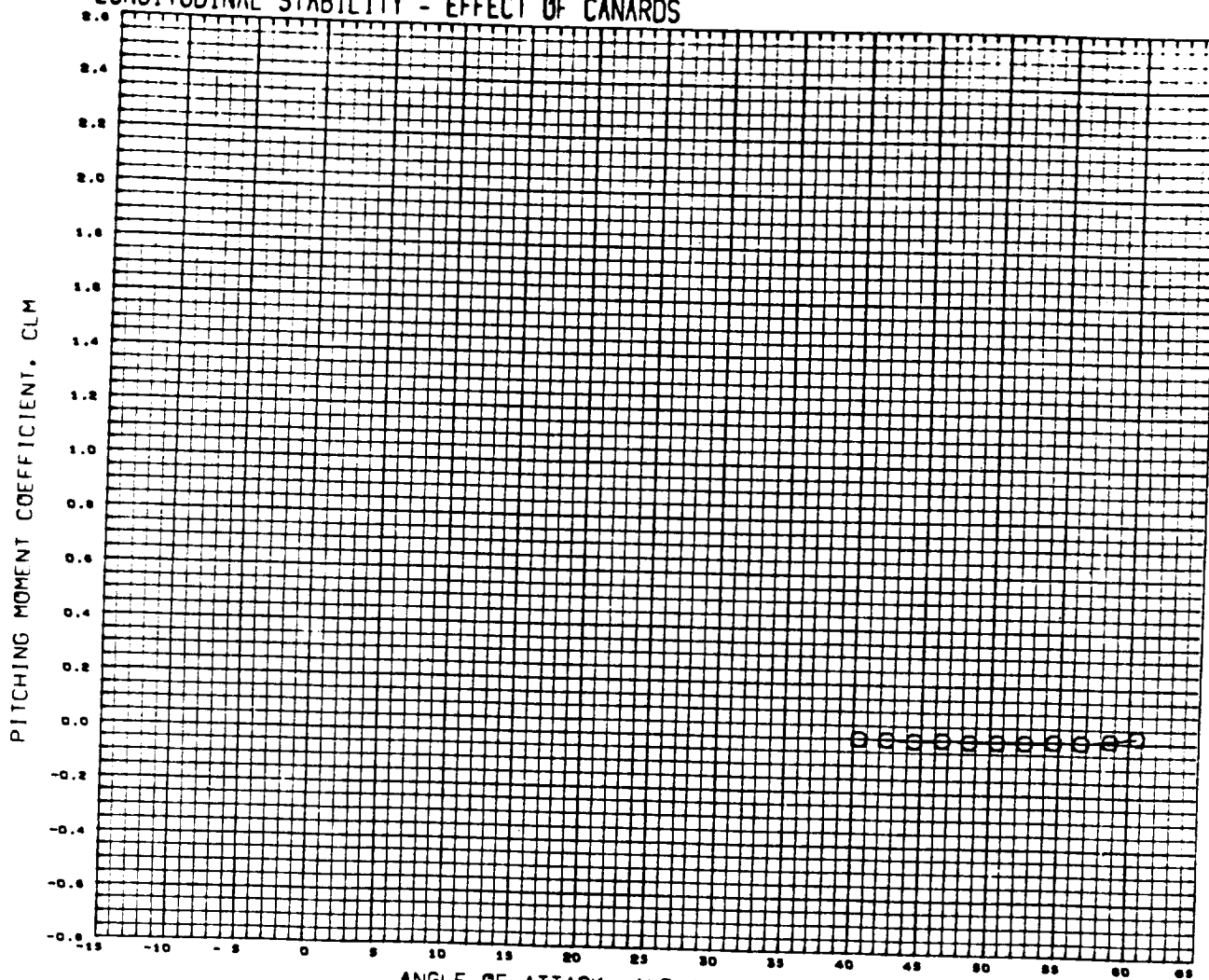


SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	MACH	4.999	BETA	0.000	DEL	0.000	SREF	7.7003
	DER	0.000	ELEVTR	0.000			LREF	3.1700
	AILRON	0.000	CANARD	- 80.000			BREF	4.3920
							XMRP	2.4000
							YMRP	0.0000
							ZMRP	0.0000
							SCALE	0.0025

DATA MIST. CODE NOE

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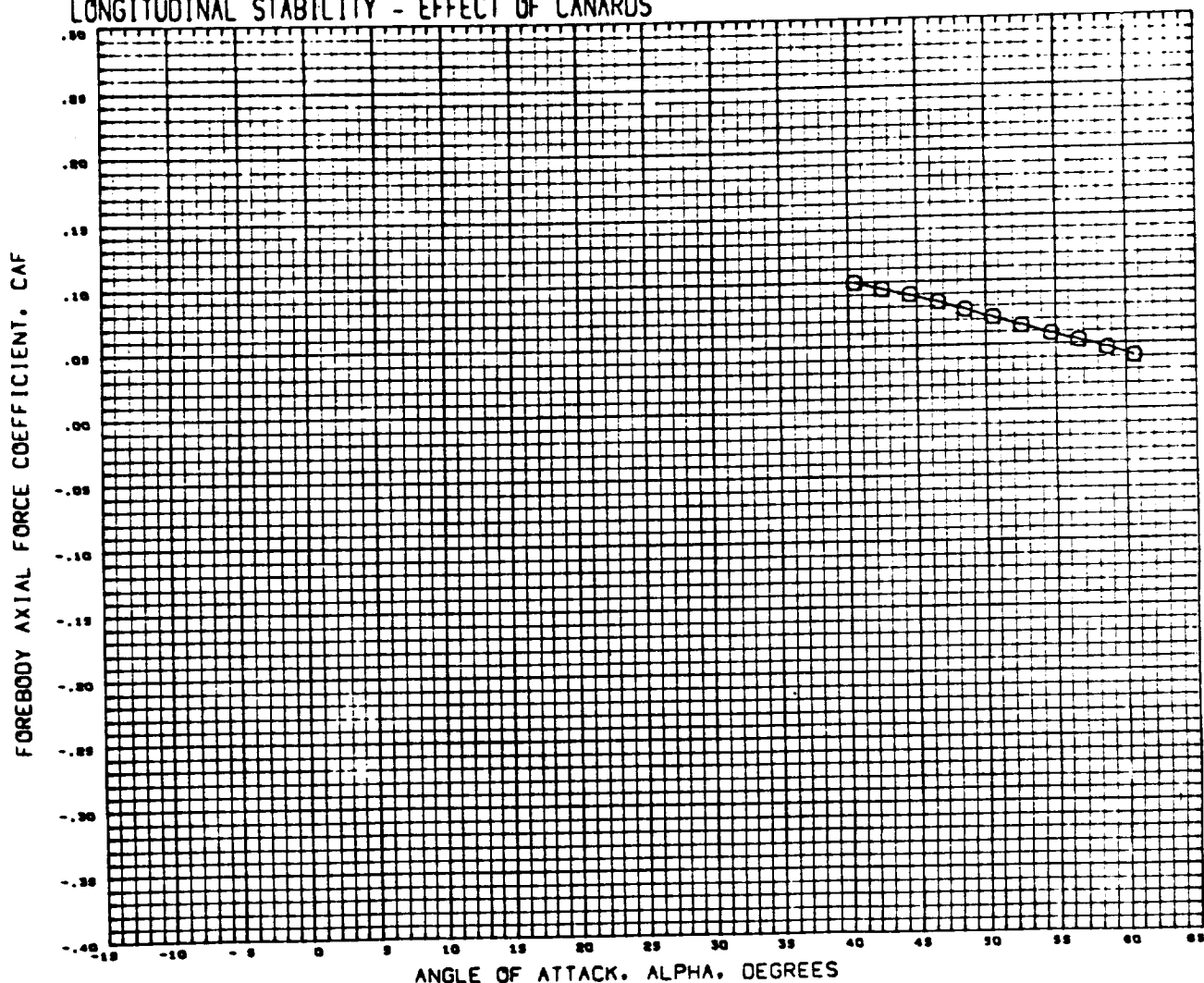
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
0	4.959	BETA	0.000	DEL	0.000	BREF	7.7003
		DER	0.000	ELEVTR	0.000	LREF	3.1700
		ATLROM	0.000	CANARD	- 80.000	BREF	4.3920
						XMRP	2.4000
						YMRP	0.0000
						ZMRP	0.0000
						SCALE	0.0025

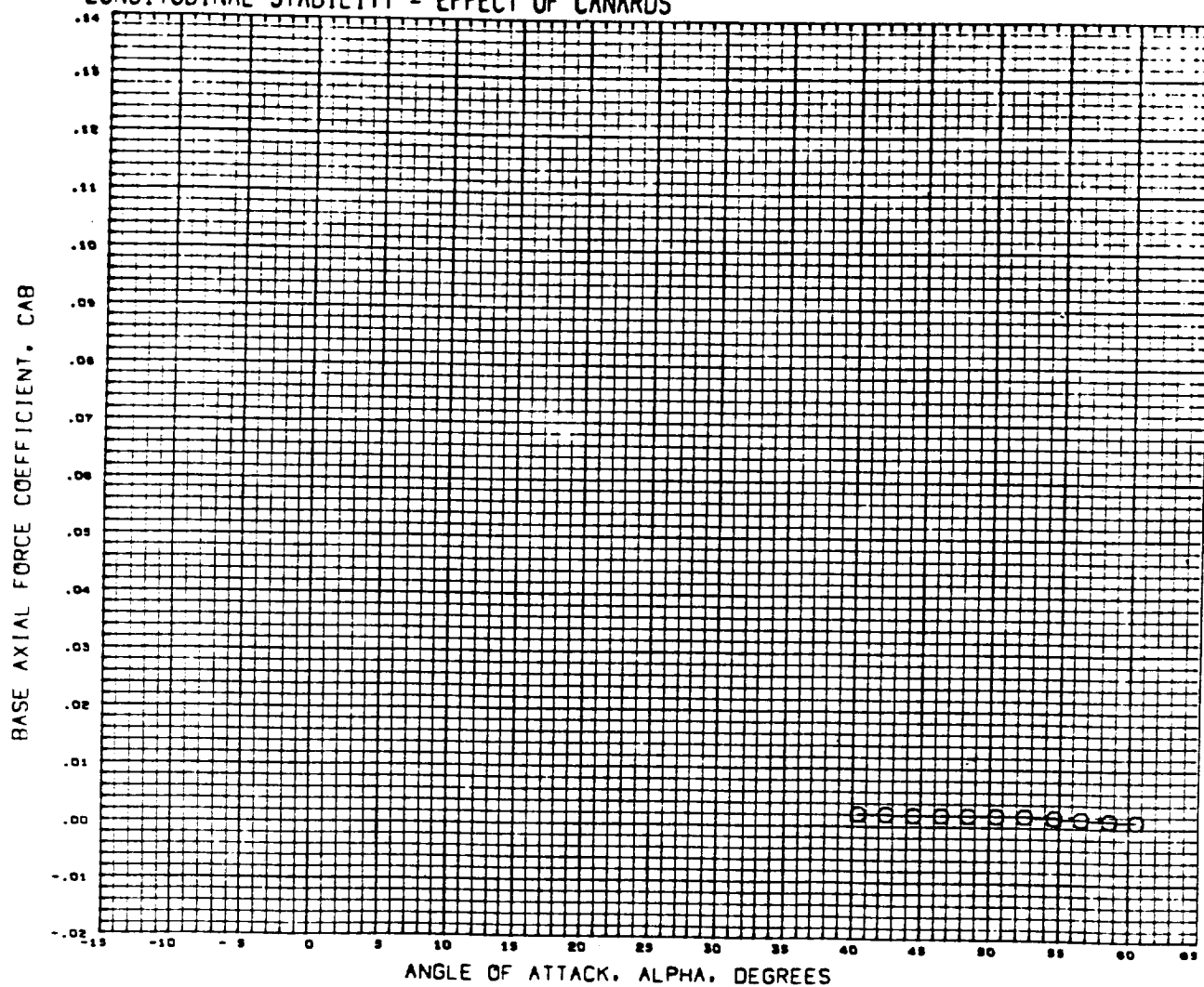
DATA HIST. CODE M#E M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3827K) 06 SEP 72 PAGE 753

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	MACH	BETA	DEL	ELEVTR	AILRON	SREF	LREF	BREF
	4.939	0.000	0.000	0.000	0.000	7.7005	3.1700	4.3920
		0.000	ELEVTR	0.000				2.4000
		0.000	CANARD	- 60.000				0.0000
						ZHRP	YHRP	SCALE
						0.0000	0.0000	0.0025

LONGITUDINAL STABILITY - EFFECT OF CANARDS



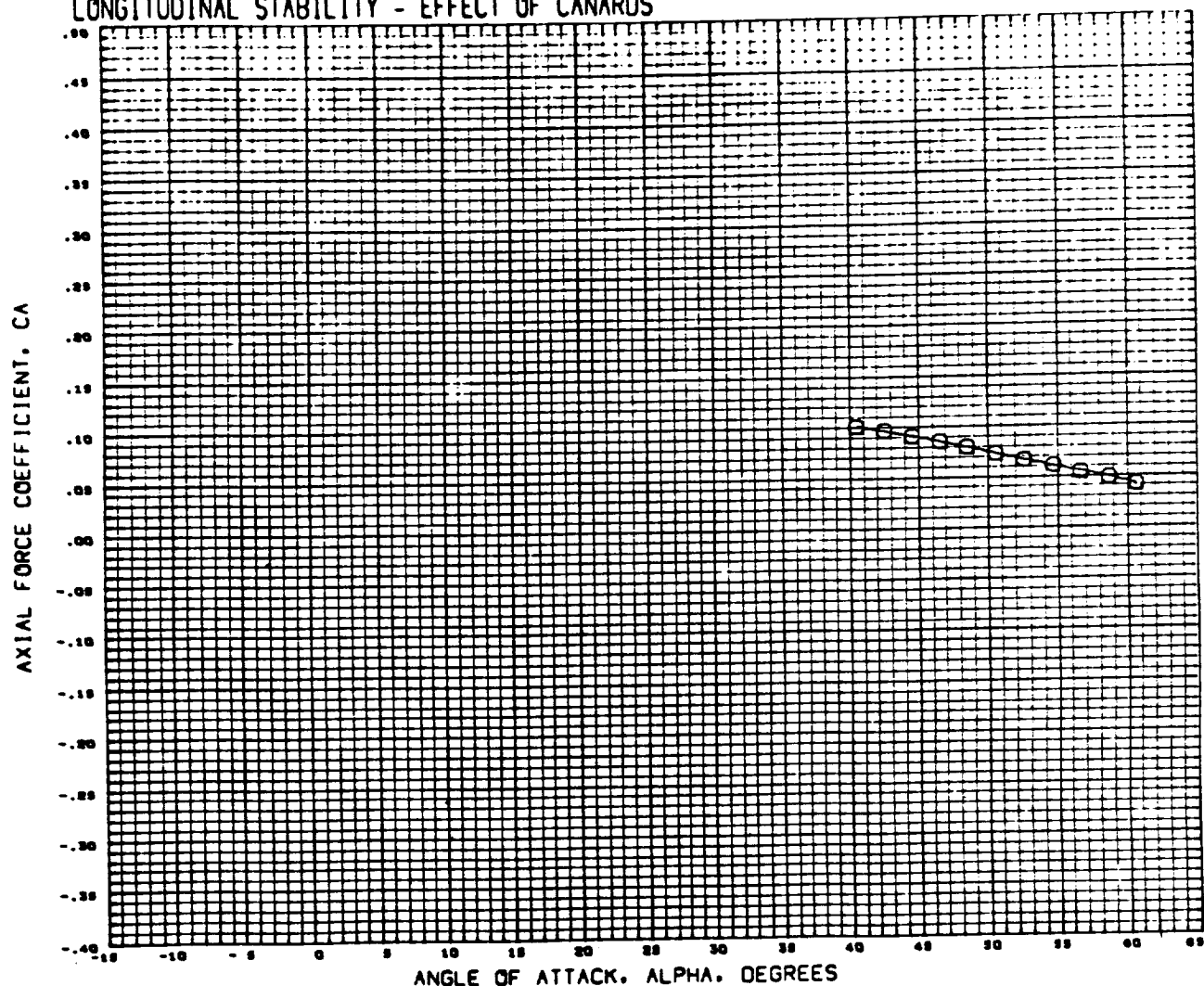
SYMBOL MACH
 O 4.959

PARAMETRIC VALUES
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRGN 0.000 CANARD - 60.000

REFERENCE INFORMATION
 SREF 7.7005 30. IN.
 LREF 3.1700 IN.
 BREF 4.3920 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA MIST. CODE M+E

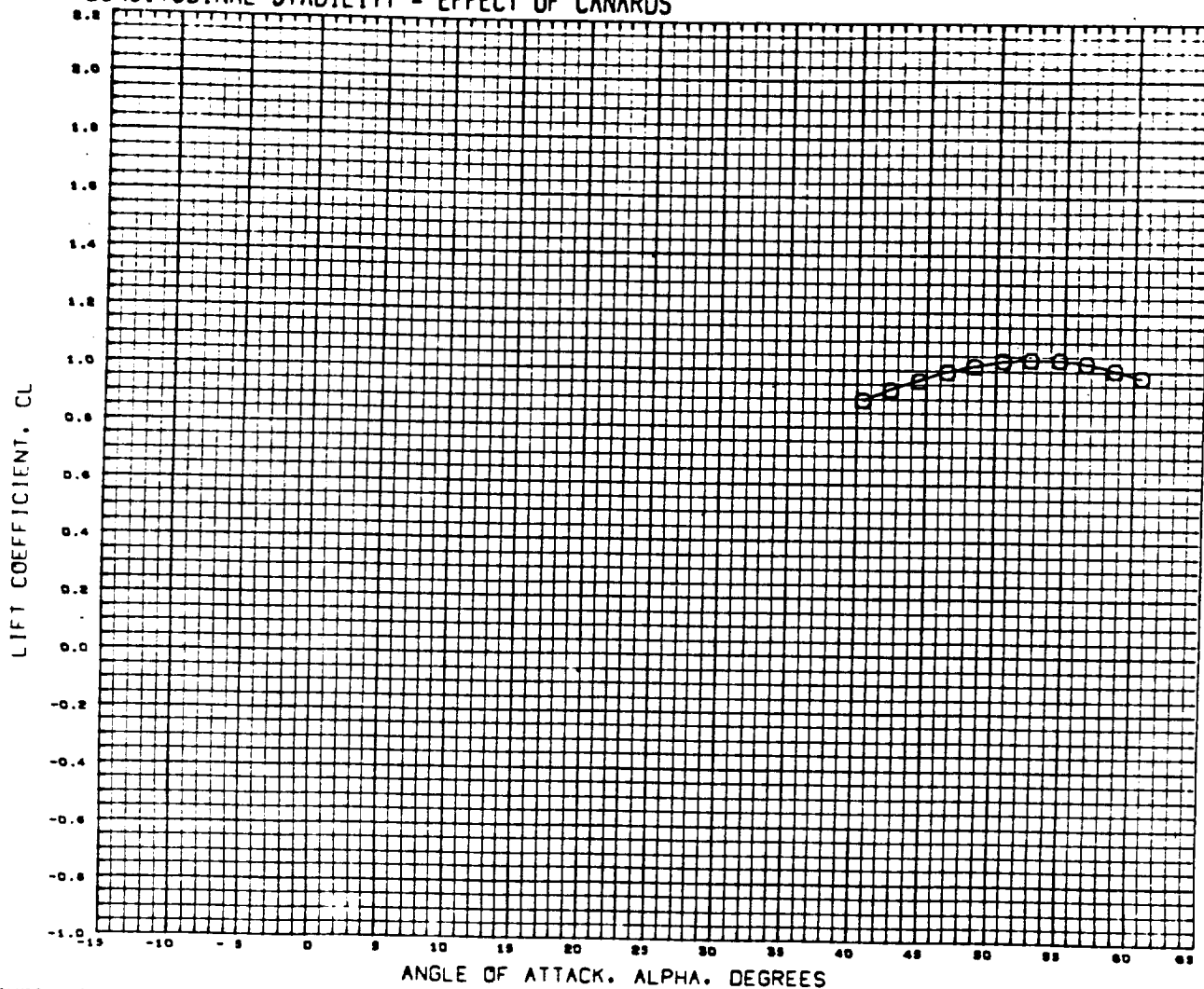
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL		PARAMETRIC VALUES				REFERENCE INFORMATION		
O	MACH	BETA	DEL	ELEVTR	AILRON	SREP	LRP	SR.IN.
	4.999	0.000	0.000	0.000	0.000	SRP	4.3920	IN.
		0.000	ELEVTR	0.000		XMRP	2.4000	IN.
		0.000	CANARD	- 60.000		YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	

DATA HIST. CODE M0E

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH
O 4.999

PARAMETRIC VALUES
BETA 0.000 DEL 0.000
DER 0.000 ELEVTR 0.000
AILRON 0.000 CANARD - 80.000

DATA HIST. CODE M+E

REFERENCE INFORMATION
SREF 7.9005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3820 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

M496-MSFC

AR11981-3

MODEL

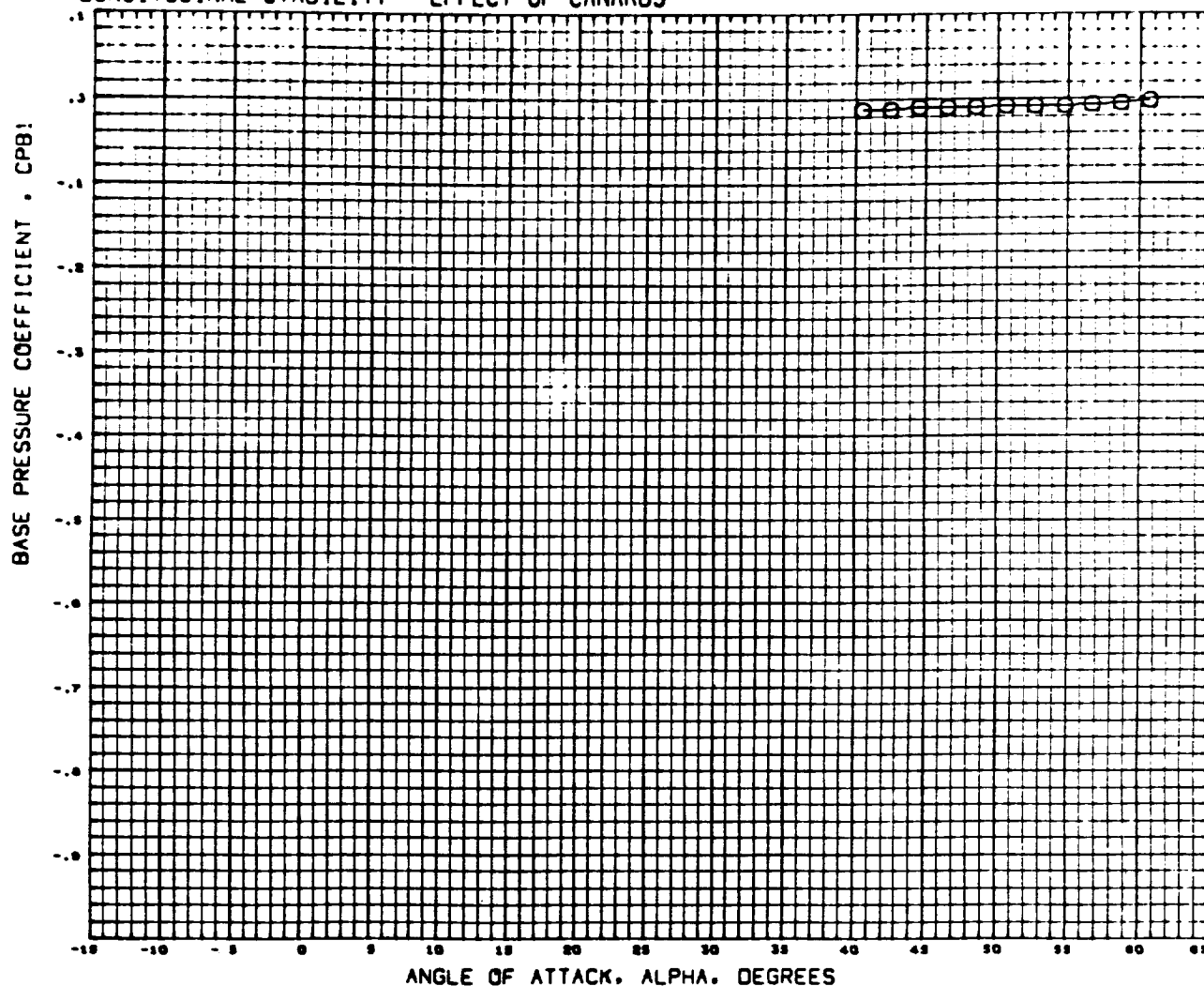
W9B2C12V1

(E3827K)

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

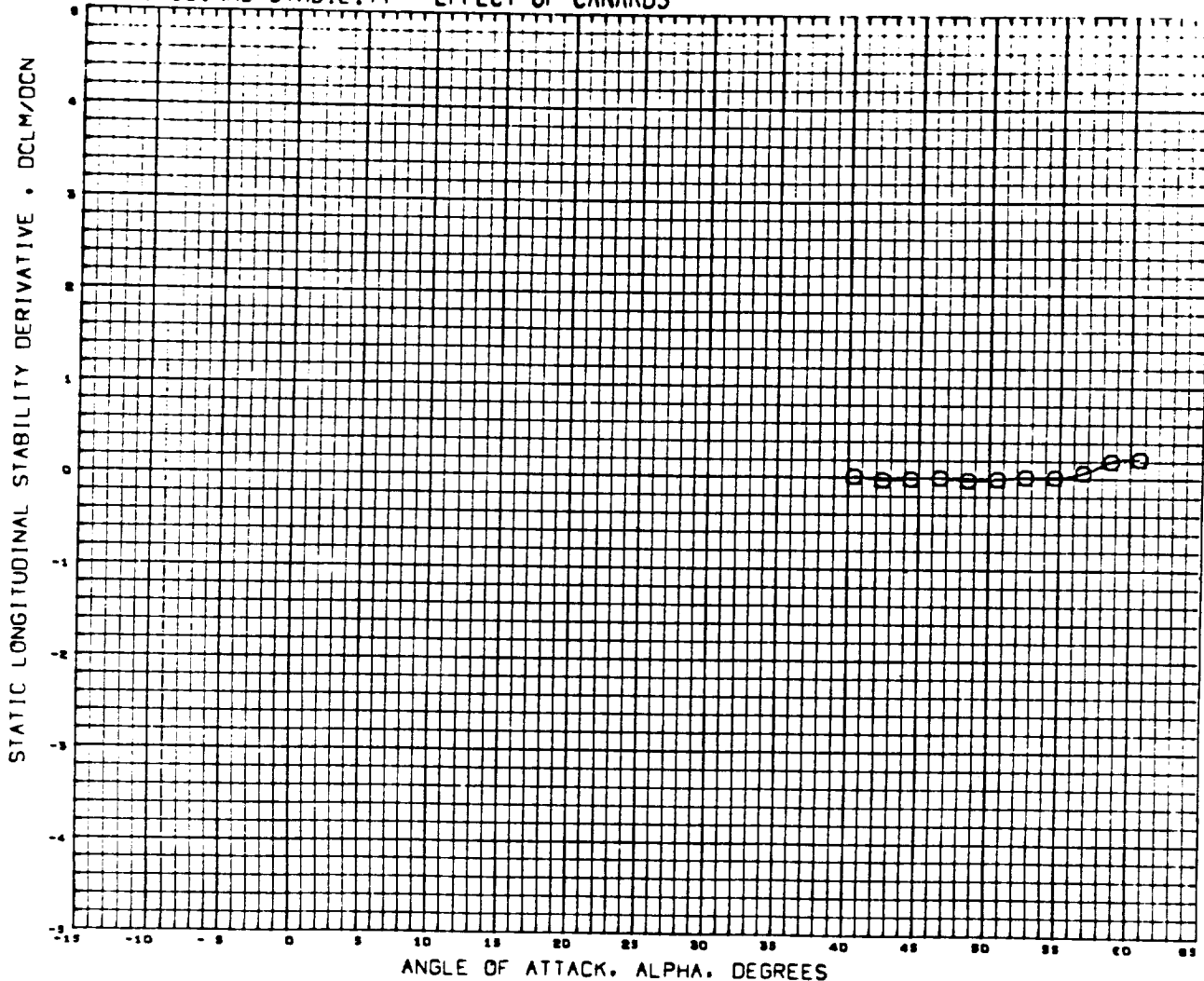


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.999	BETA	0.000	DEL	0.000	SREF	7.7003	53. IN.
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		AILRON	0.000	CANARD	- 60.000	BREF	4.3920	1N.
						XMRP	2.4000	1N.
						YMRP	0.0000	1N.
						ZMRP	0.0000	1N.
						SCALE	0.0025	

DATA HIST. CODE NOE

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL
O

MACH
4.959

PARAMETRIC VALUES

BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
ATLRON	0.000	CANARD	- 60.000

DATA HIST. CODE M0E

REFERENCE INFORMATION

SREF	7.7005	SQ. IN.
LREF	3.1700	IN.
BREF	4.3820	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

N486-MSFC

AR11981-3

MODEL

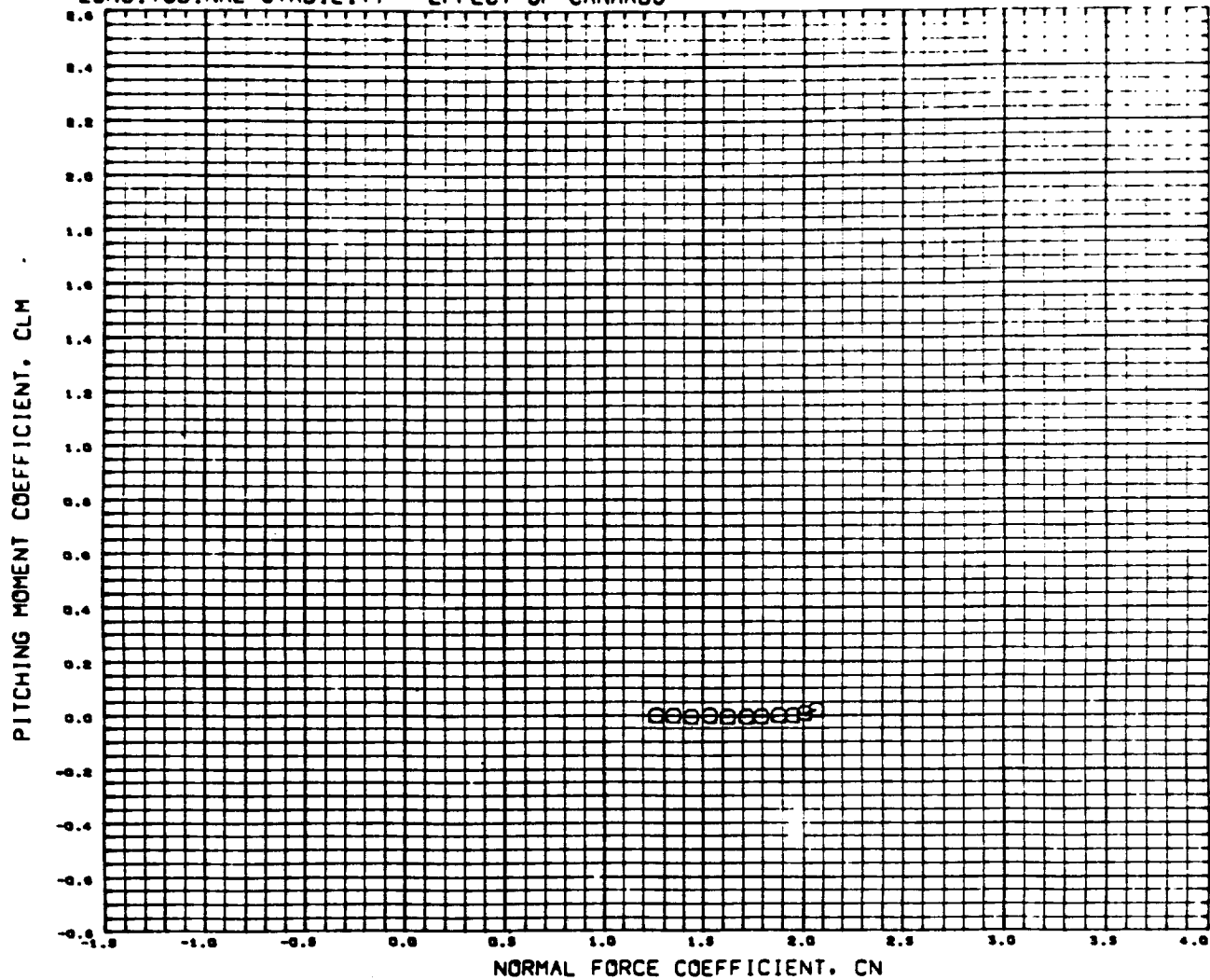
W9B2C12V1

(E3827K)

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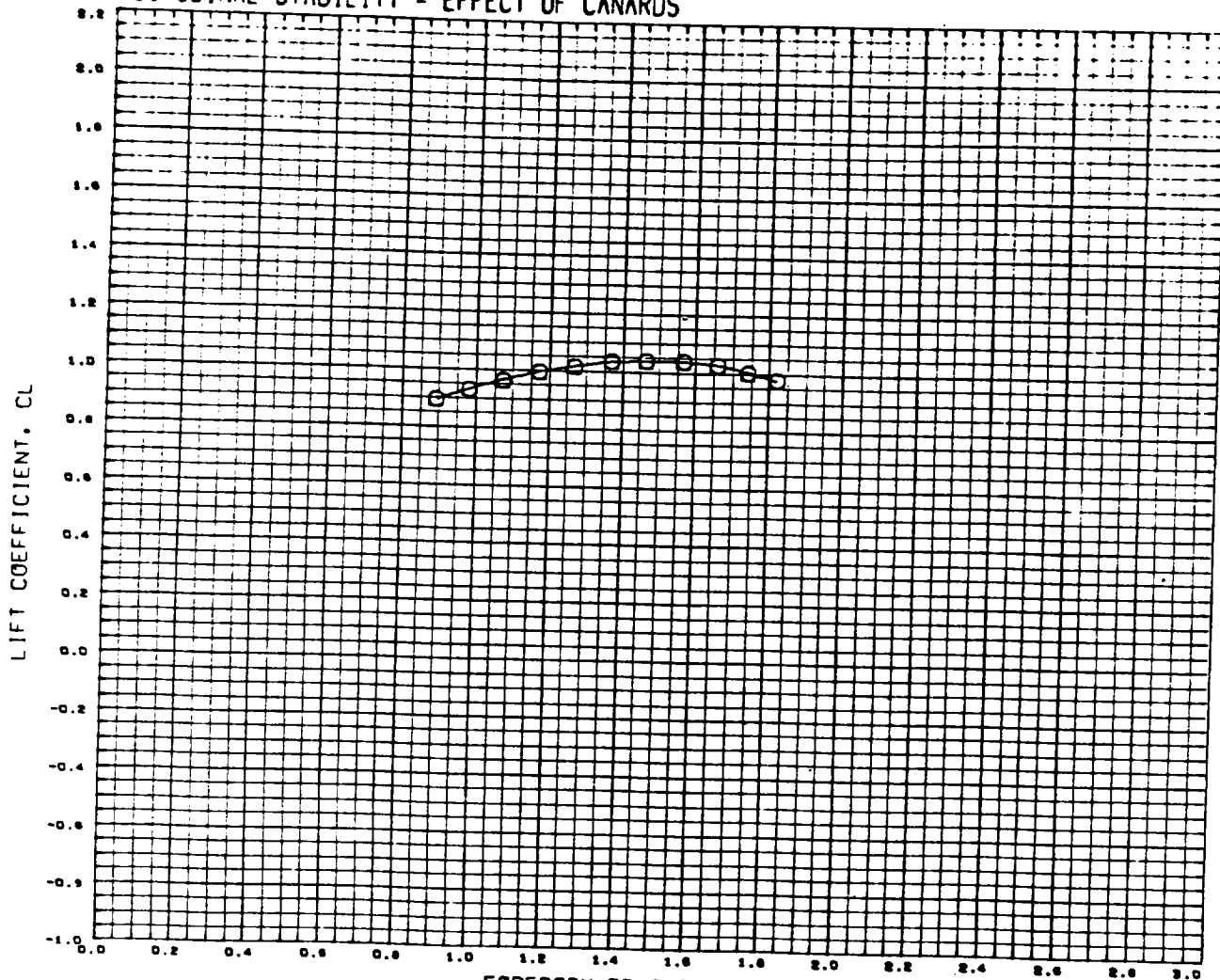
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	4.959	BETA	0.000	DEL	0.000	SREF	7.7009	80. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700	IN.
		ATLRON	0.000	CANARD	- 80.000	BREF	4.3980	IN.
						XWRP	2.4000	IN.
						YWRP	0.0000	IN.
						ZWRP	0.0000	IN.
						SCALE	0.0029	

DATA HIST. CODE	NOE						
M496-MSFC	AR1198I-3	MODEL	W982C12V1	(E3827K)	06 SEP 72	PAGE	760

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL MACH
○ 4.959

PARAMETRIC VALUES
BETA 0.000 DEL 0.000
DER 0.000 ELEVTR 0.000
ATLCON 0.000 CANARD - 60.000

REFERENCE INFORMATION
SREF 7.7003 SQ. IN.
LREF 3.1700 IN.
BREF 4.3820 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0023 IN.

DATA HIST. CODE M=2

M496-MSFC

AR11981-3

MODEL

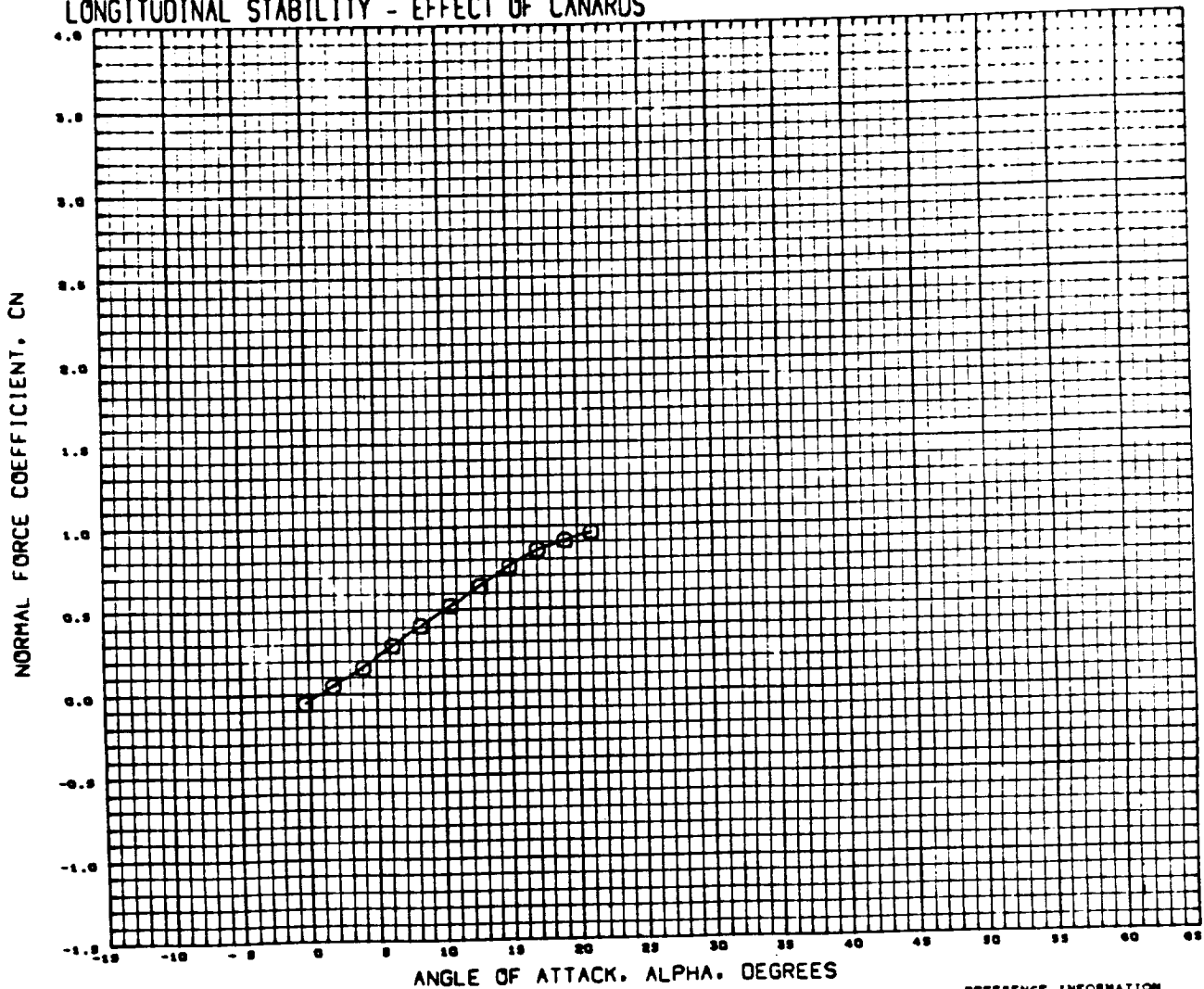
W9B2C12V1

(E3827K)

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

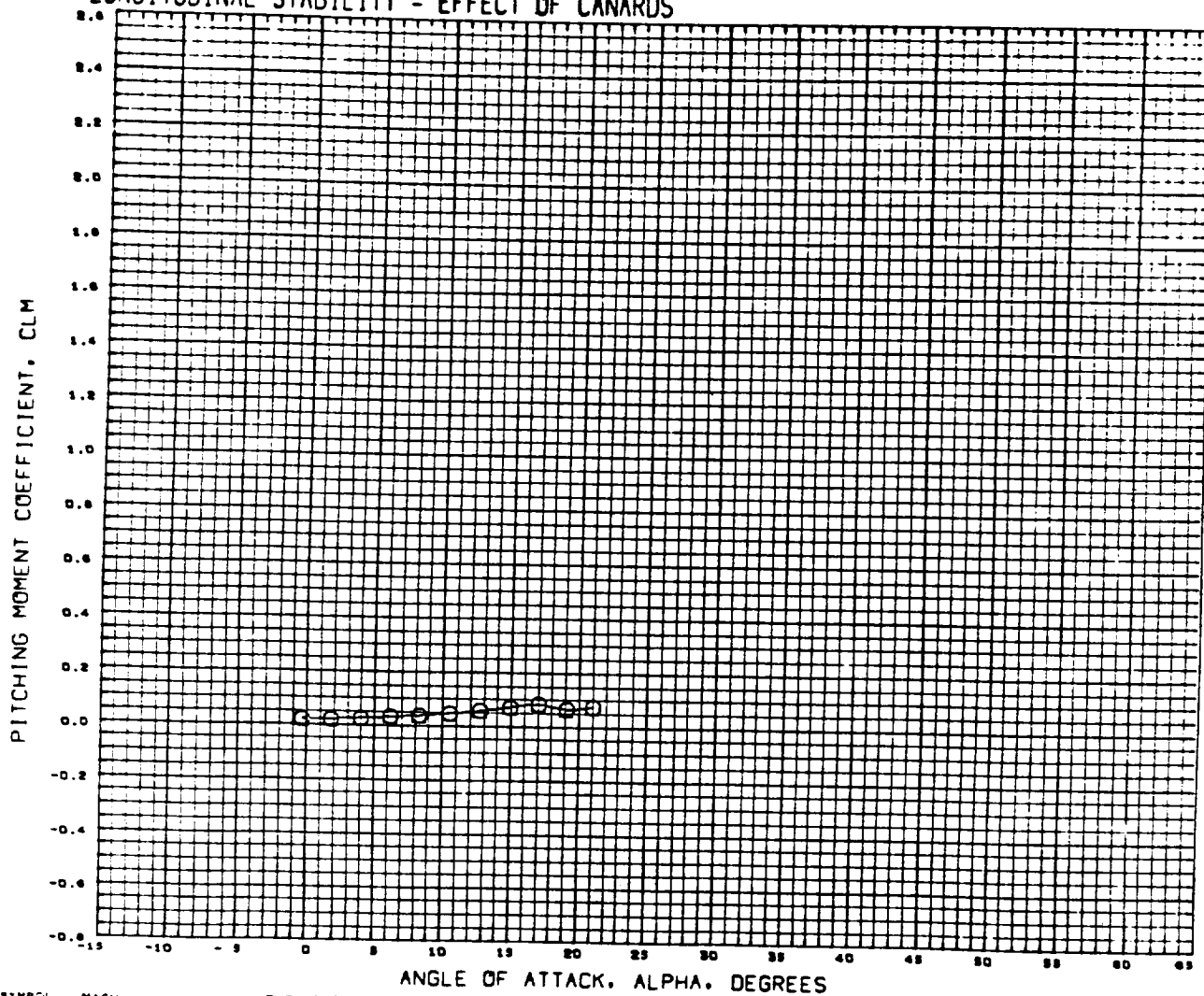


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SRP	50 IN.
○	0.999	0.000	0.000	0.000	0.000	LRP	3.1700 IN.
		0.000	0.000	0.000	0.000	ORP	4.3920 IN.
		0.000	0.000	0.000	0.000	XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE M=0

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL
O

MACH
0.999

PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	0.000

DATA HIST. CODE M4E

REFERENCE INFORMATION		
BREF	7.7000	50. IN.
LREF	3.1700	IN.
BREF	4.3520	IN.
KNRP	2.4000	IN.
YNRP	0.0000	IN.
ZNRP	0.0000	IN.
SCALE	0.0025	

M496-MSFC

AR11981-3

MODEL

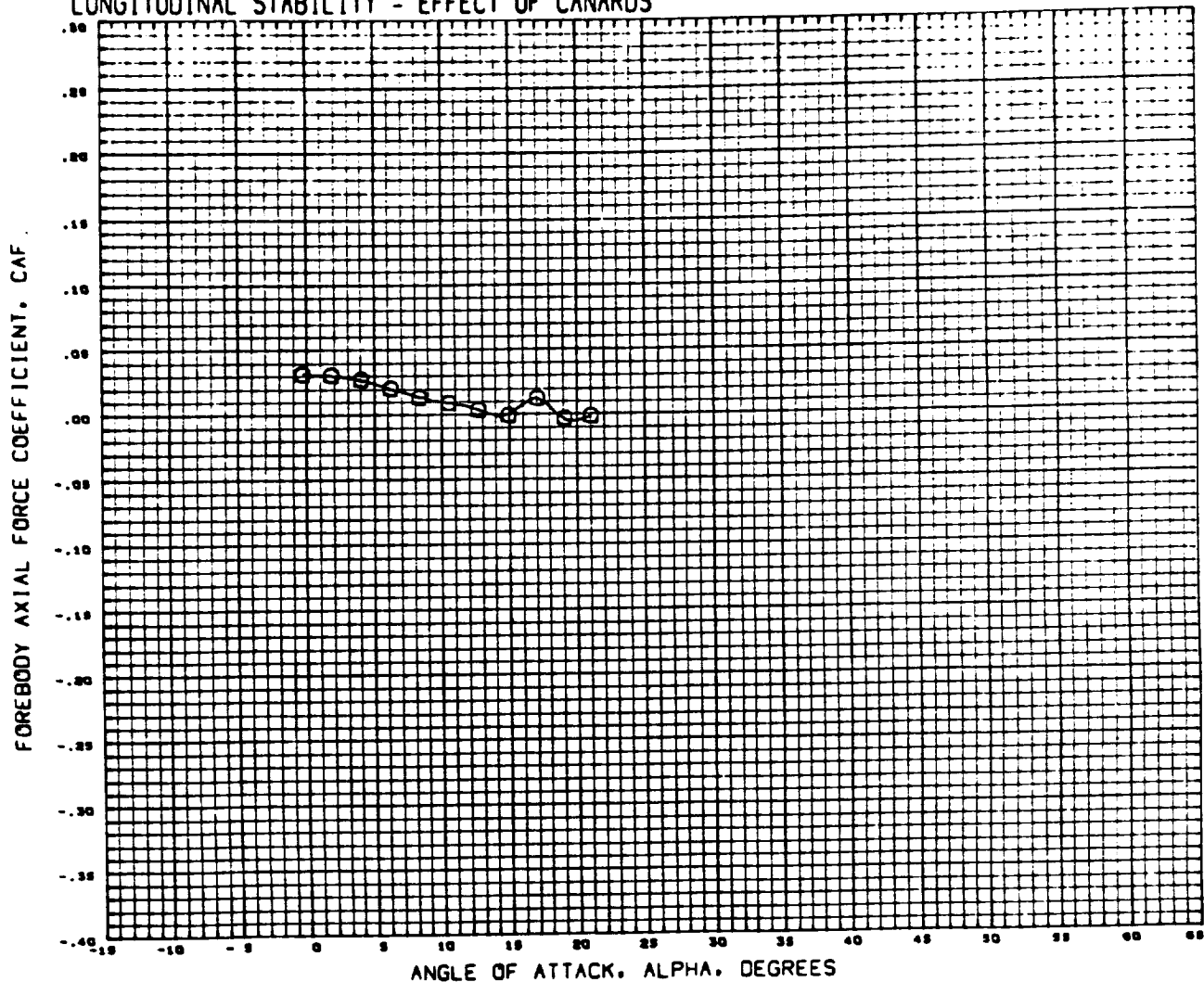
W9B2C12V1

(E3824A)

06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS

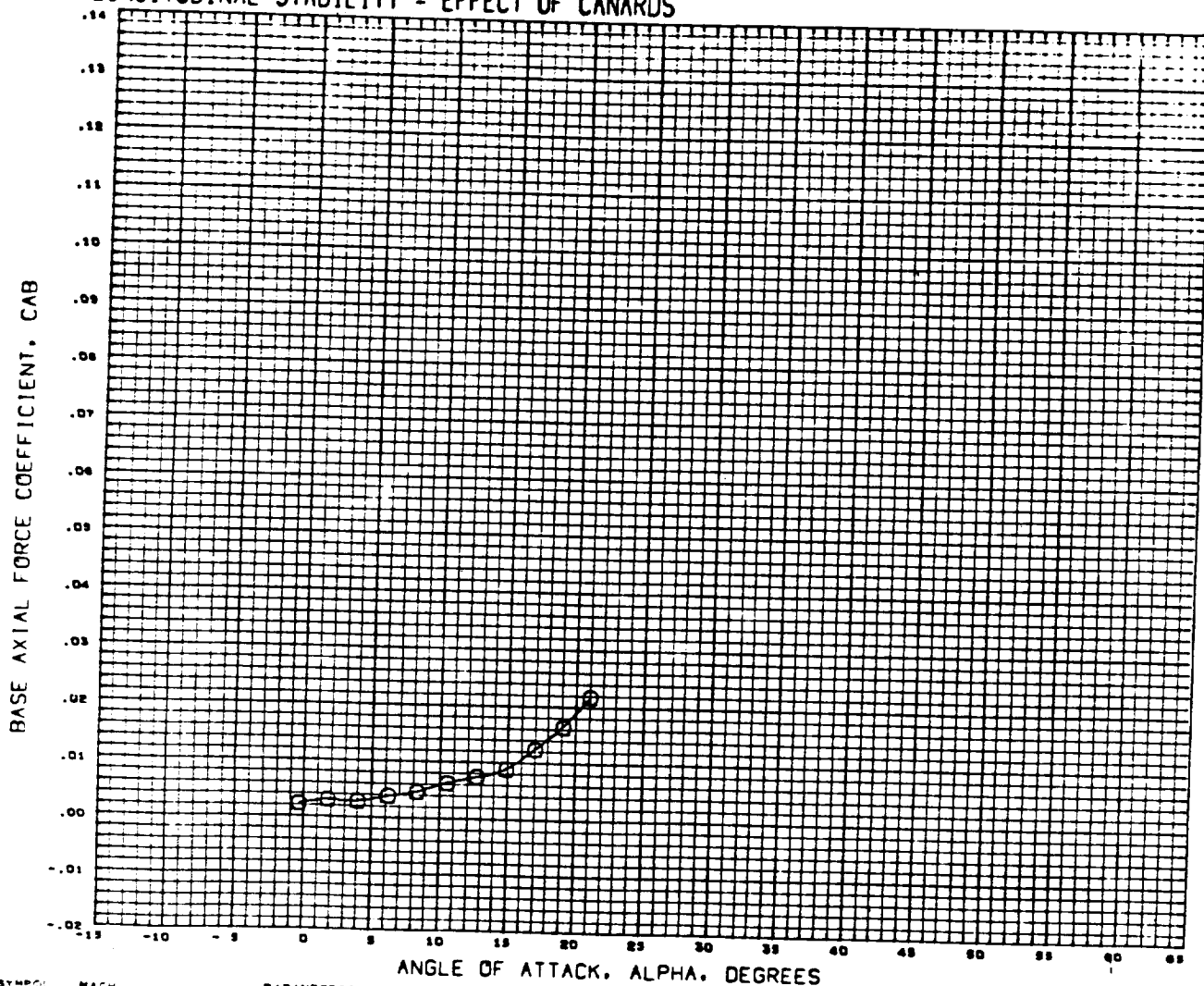


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
		BETA	DEL	ELEVTR	CANARD	SREF	LREF	XMRP
0	0.999	0.000	0.000	0.000	0.000	7.7005	3.1700	2.4000
		0.000				4.3920		0.0000
		0.000				0.0000		0.0000
						0.0025		

DATA MIST. CODE N+E

M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3824A) 06 SEP 72 PAGE 764

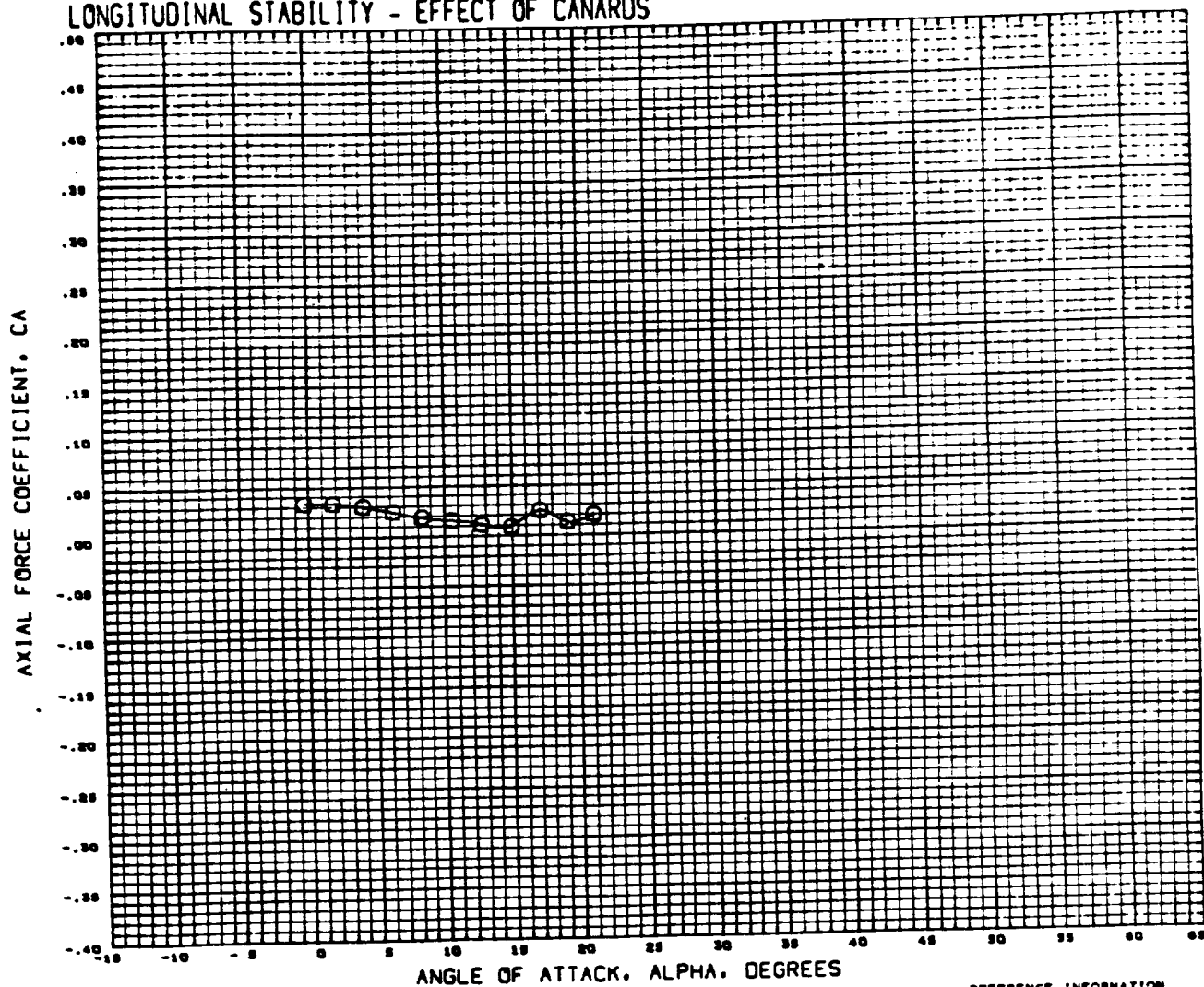
LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
○	0.999	BETA	0.000	DEL	0.000	SREF	7.7005 SQ. IN.
		DER	0.000	ELEVTR	0.000	LREF	3.1700 IN.
		ATLRON	0.000	CANARD	0.000	SREF	4.3920 IN.
						XMRP	2.4000 IN.
						YMRP	0.0000 IN.
						ZMRP	0.0000 IN.
						SCALE	0.0025

DATA HIST. CODE MRE
 M496-MSFC AR11981-3 MODEL W9B2C12V1 (E3824A) 06 SEP 72 PAGE 765

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 0.599
 BETA 0.000 DEL 0.000
 DER 0.000 ELEVTR 0.000
 ATLRON 0.000 CANARD 0.000

REFERENCE INFORMATION
 SREP 7.7005 93 IN.
 LREP 3.1700 IN.
 BRP 4.3920 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE M0E

M496-MSFC

AR11981-3

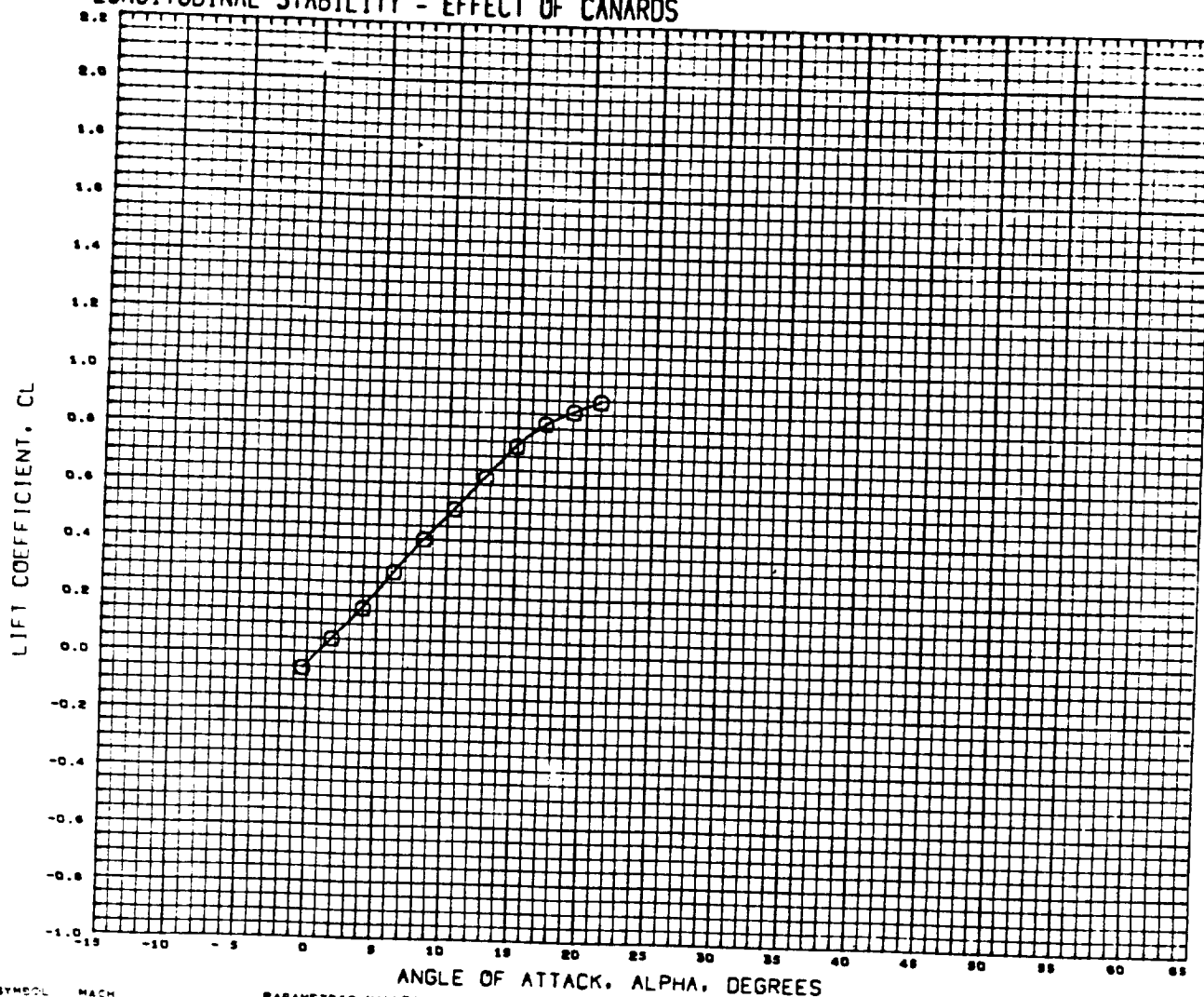
MODEL

W9B2C12V1

(E3824A) 06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL

○

MACH
0.999

BETA
DER
ATLON

PARAMETRIC VALUES

0.000 DEL 0.000
0.000 ELEVTR 0.000
0.000 CANARD 0.000

ANGLE OF ATTACK, ALPHA, DEGREES

REFERENCE INFORMATION

SREF 7.7005 SQ. IN.
LREF 3.1700 IN.
BREF 4.3920 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE M&E

M496-MSFC

AR11981-3

MODEL

W9B2C12V1

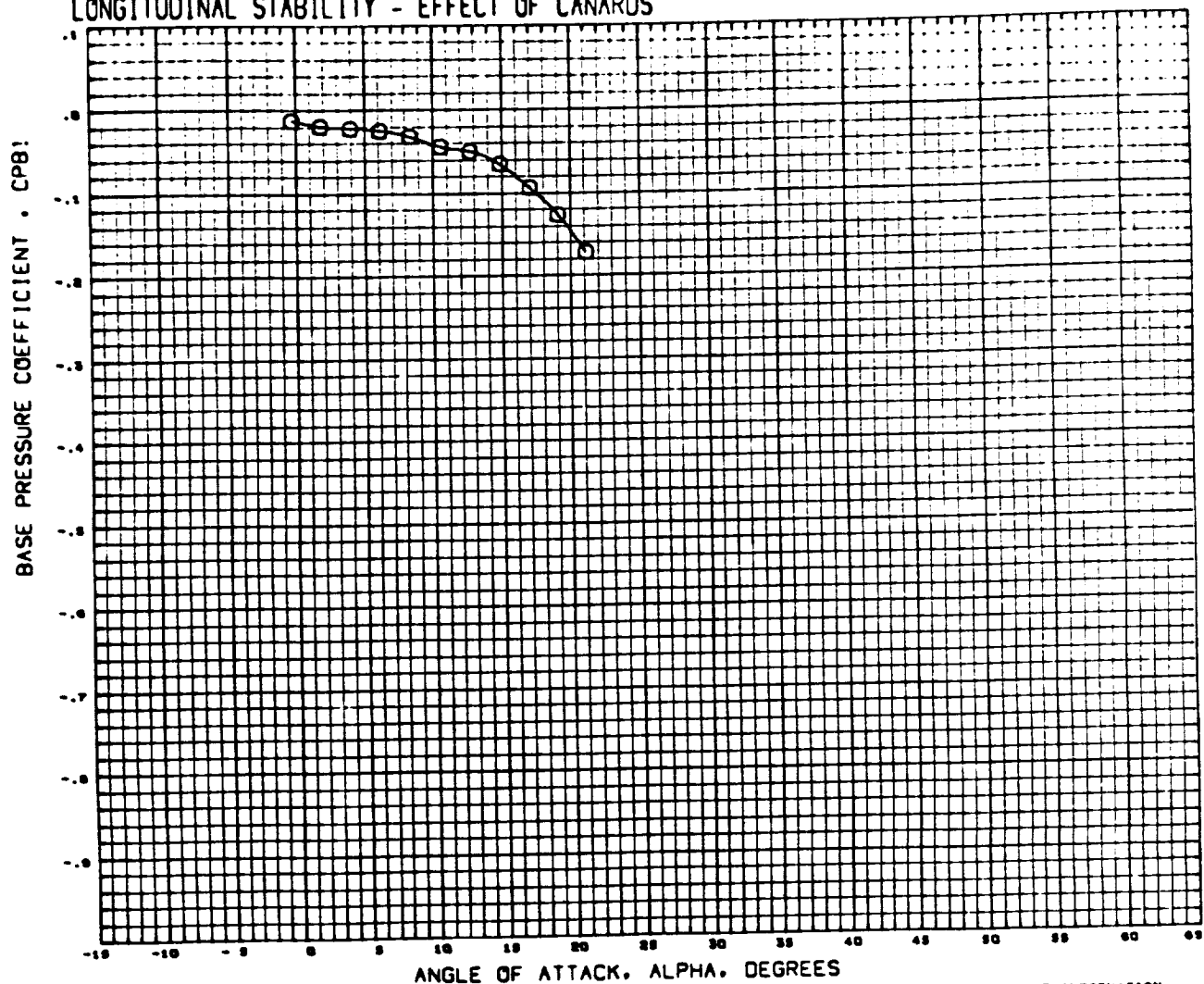
(E3824A)

06 SEP 72

PAGE

767

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION	
		BETA	DEL	ELEVTR	CANARD	SRP	IN.
○	0.999	0.000	0.000	0.000	0.000	7.7000	33. IN.
		DER	ELEVTR			3.1700	IN.
		ATLROM	CANARD			4.3920	IN.
						2.4000	IN.
						0.0000	IN.
						0.0000	IN.
						0.0025	IN.

DATA HIST. CODE M&E

M496-MSFC

AR11981-3

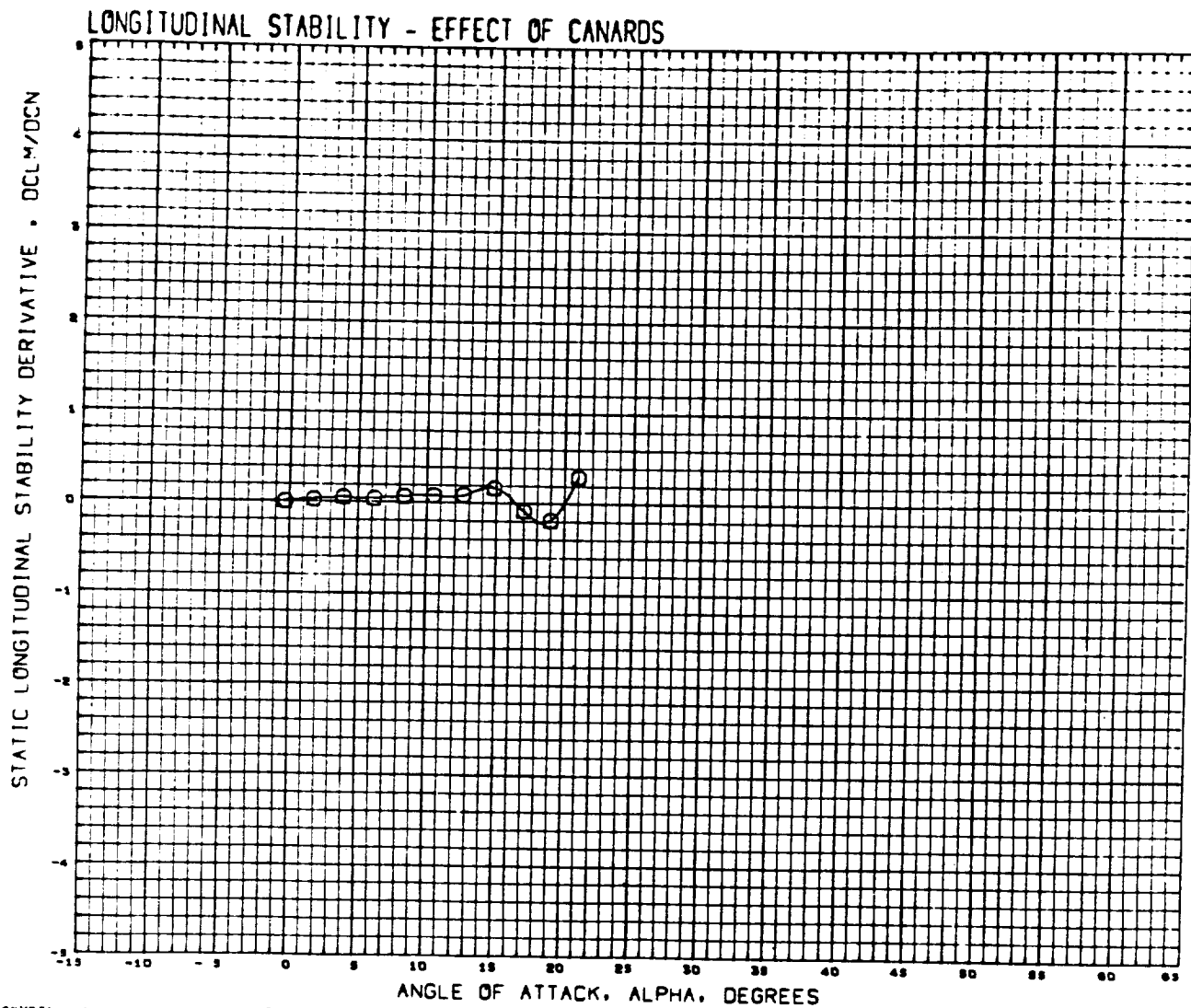
MODEL

W9B2C12V1

(E3824A)

06 SEP 72

PAGE 768

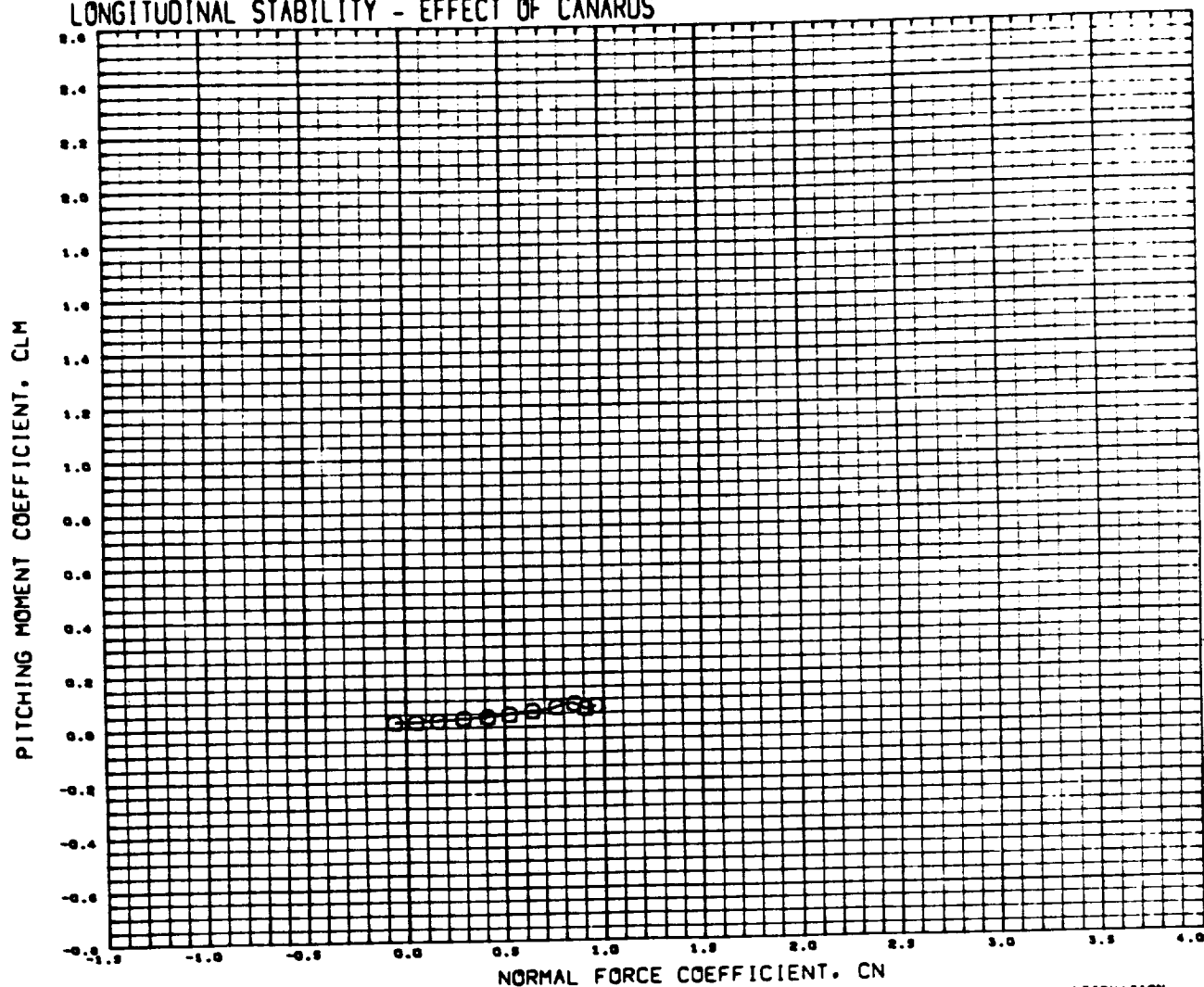


SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.599	BETA	0.000	DEL	0.000	SREF	7.7005	sq. in.
		DER	0.000	ELEVTR	0.000	LRFP	3.1700	in.
		AILRON	0.000	CANARD	0.000	BRFP	4.3920	in.
						ZHRP	2.4000	in.
						YHRP	0.0000	in.
						ZHRP	0.0000	in.
						SCALE	0.0025	in.

DATA HIST. CODE	MSE				
496-MSFC	AR11981-3	MODEL	W982C12V1	(E3824A)	06 SEP 72

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL
○

MACH
0.500

PARAMETRIC VALUES			
BETA	0.000	DEL	0.000
DER	0.000	ELEVTR	0.000
AILRON	0.000	CANARD	0.000

REFERENCE INFORMATION		
SREP	7.7000	50. IN.
LREP	3.1700	IN.
BREP	4.3920	IN.
KMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE M=0

M496-MSFC

AR11981-3

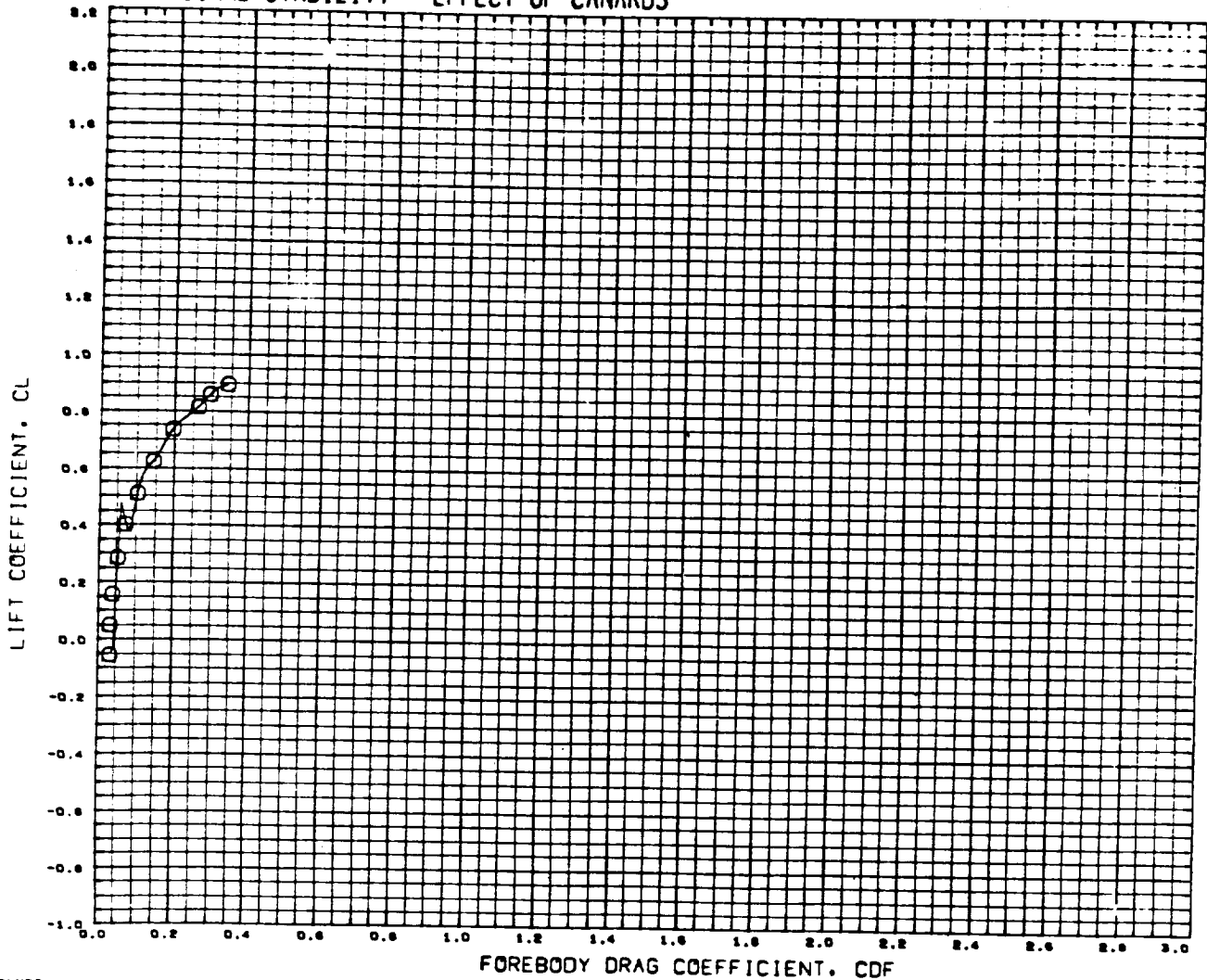
MODEL

W982C12V1

(E3824A) 06 SEP 72

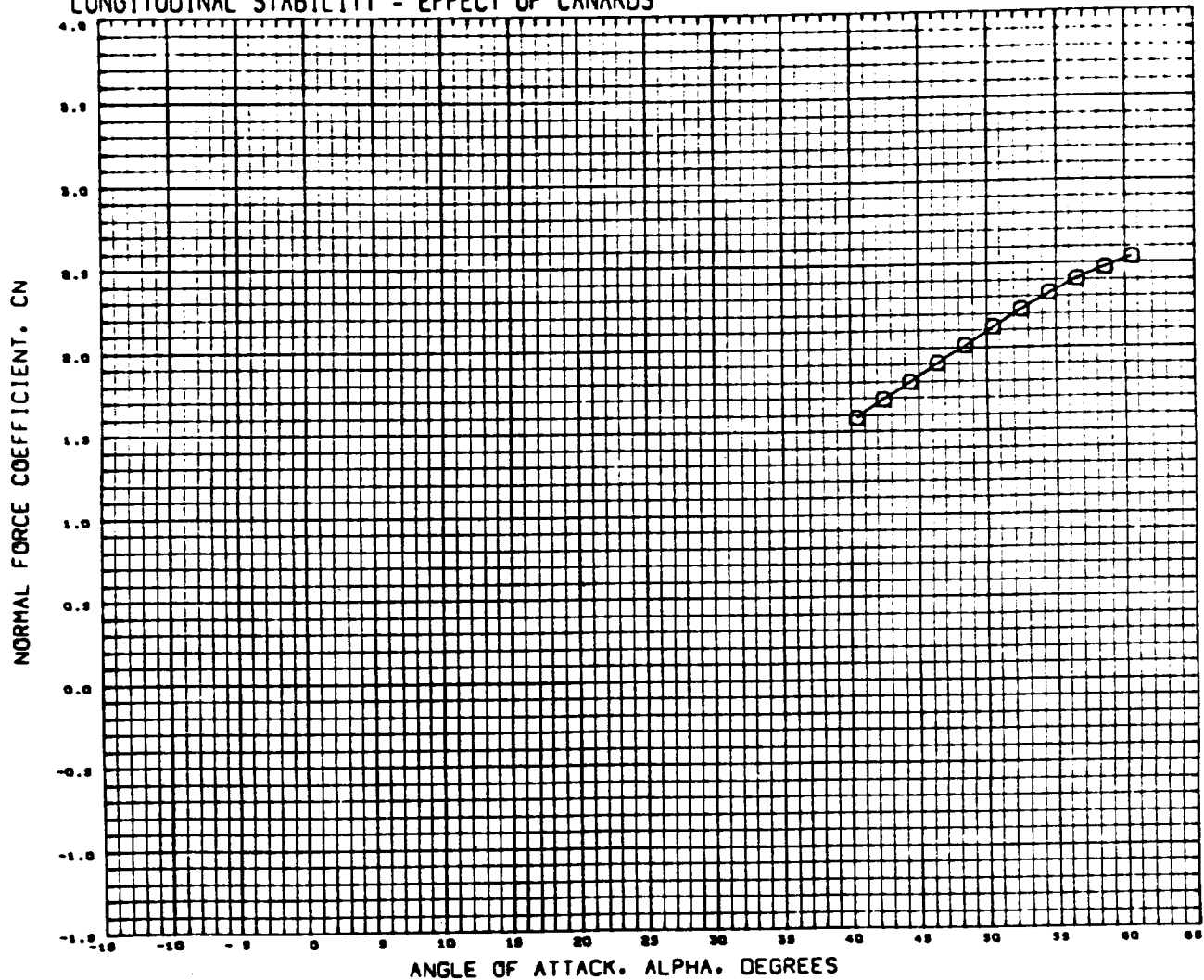
PAGE 770

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL	MACH	PARAMETRIC VALUES				REFERENCE INFORMATION		
○	0.999	BETA	0.000	DEL	0.000	SRP	7.7003	80. IN.
		DER	0.000	ELEVTR	0.000	LRP	3.1700	IN.
		ATLON	0.000	CANARD	0.000	SRP	4.3920	IN.
						ENRP	2.4000	IN.
						YMRP	0.0000	IN.
						ZMRP	0.0000	IN.
						SCALE	0.0025	
DATA HIST. CODE M+E								
M496-MSFC	AR11981-3	MODEL	W9B2C12V1	(E3824A)	06 SEP 72	PAGE	771	

LONGITUDINAL STABILITY - EFFECT OF CANARDS



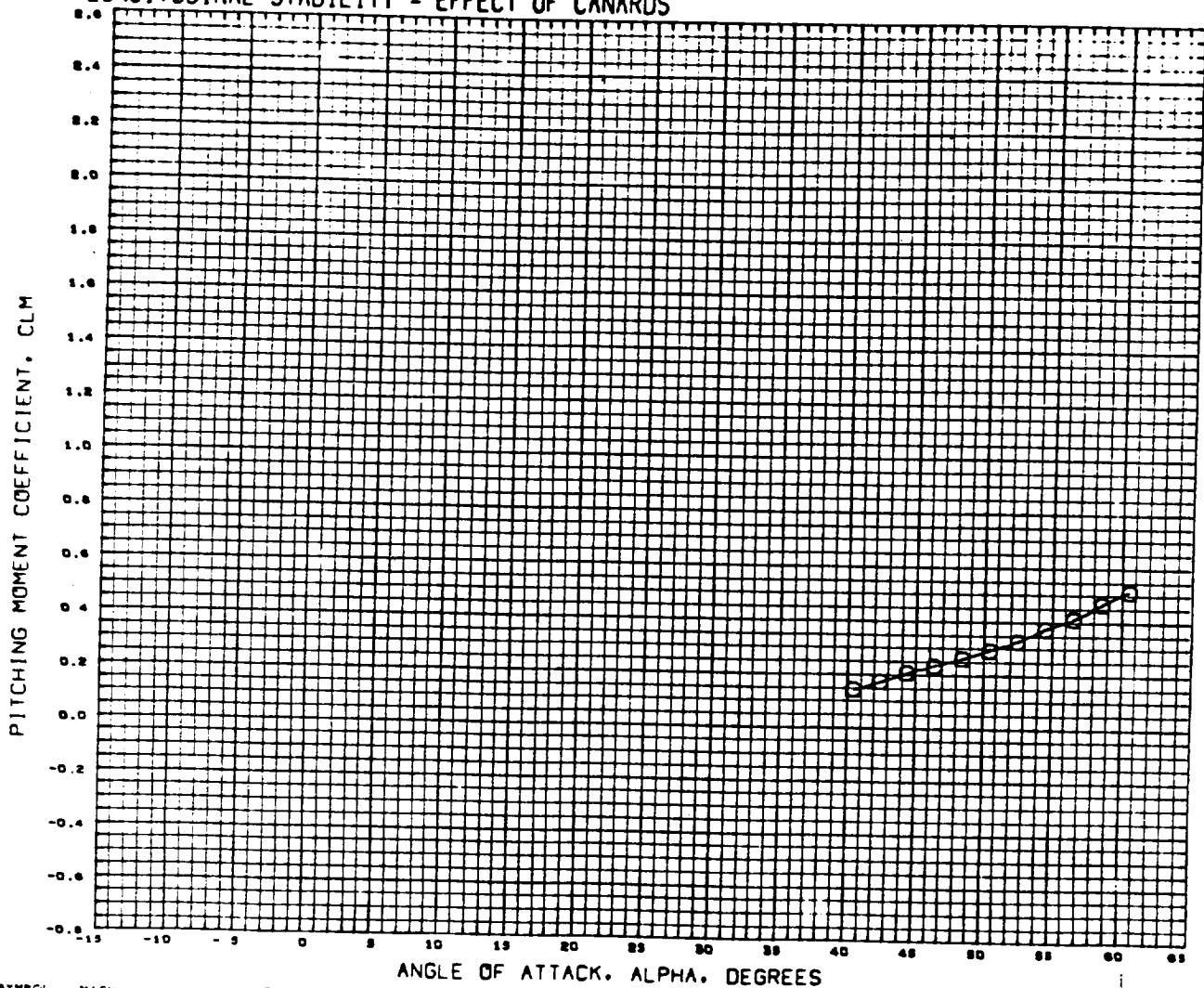
SYMBOL \bigcirc MACH 4.999 BETA 0.000 CANARD - 80.000

REFERENCE INFORMATION
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 LREP 1.5360 IN.
 BREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 772

LONGITUDINAL STABILITY - EFFECT OF CANARDS



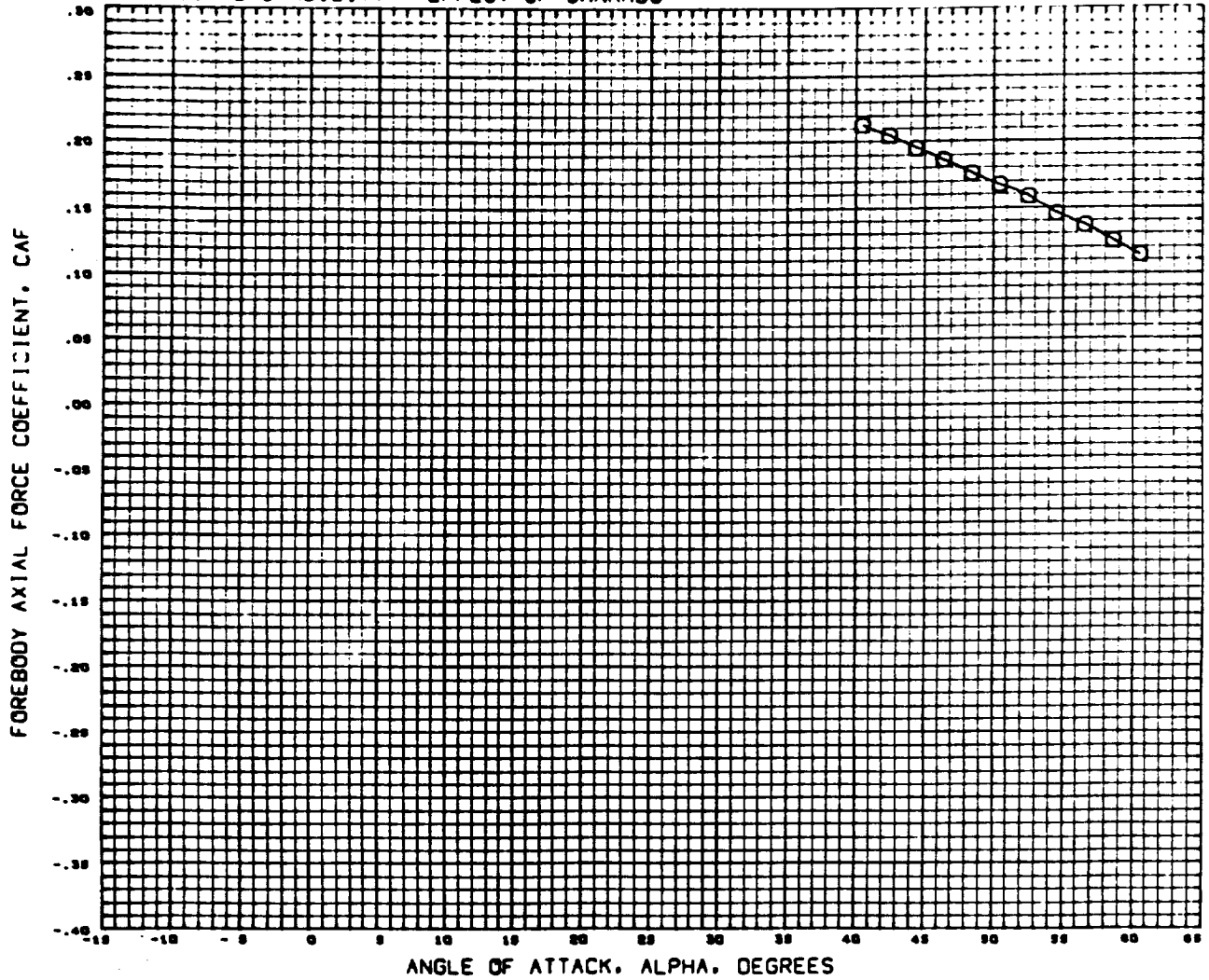
SYMBOL MACH 4.959 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 QREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE 0E

M496-MSFC AR11981-3 MODEL W682C12V2 (E3821K) 06 SEP 72 PAGE 773

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.999 BETA 0.000 CANARD - 90.000

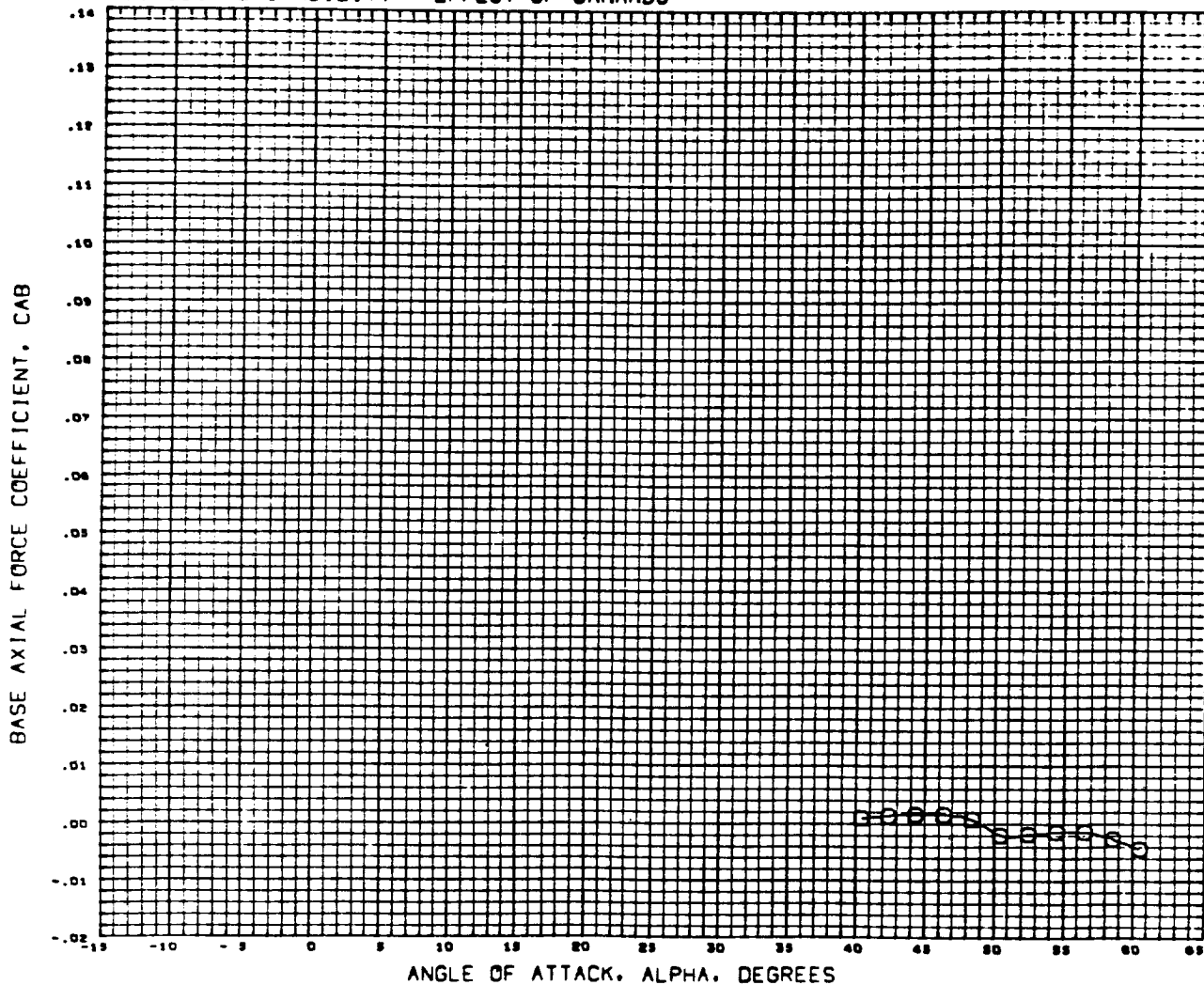
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

496-MSFC AR11981-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 774

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LONGITUDINAL STABILITY - EFFECT OF CANARDS



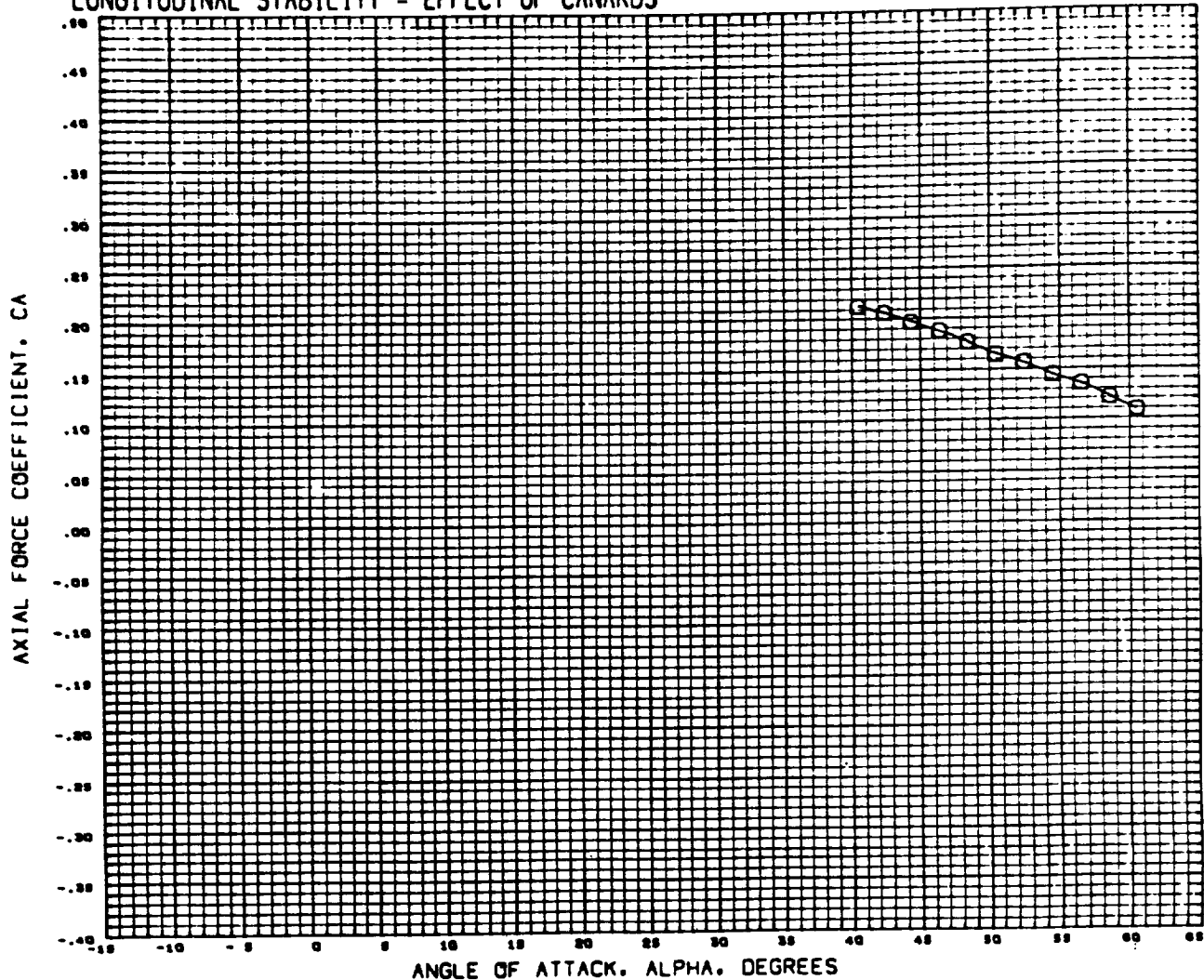
S-MEOL MACH 4.959 BETA 0.000 CANARD - 80.000
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REFERENCE INFORMATION
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 LREF 1.9360 IN.
 GREF 4.9000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E

M495-MSFC AR11981-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 775

LONGITUDINAL STABILITY - EFFECT OF CANARDS



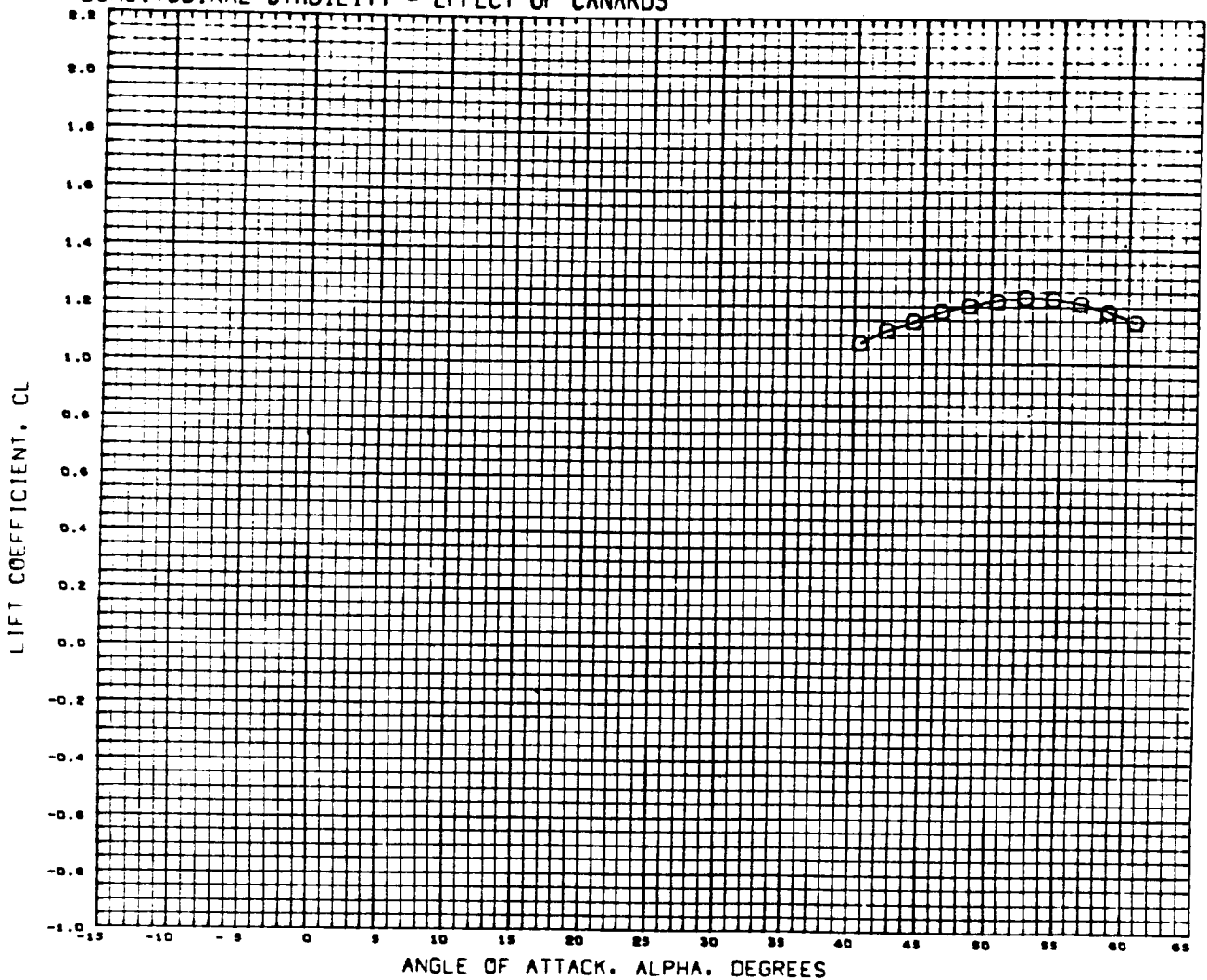
SYMBOL \bigcirc MACH 4.950 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE 0E

M496-MSFC AR1198I-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 776

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000

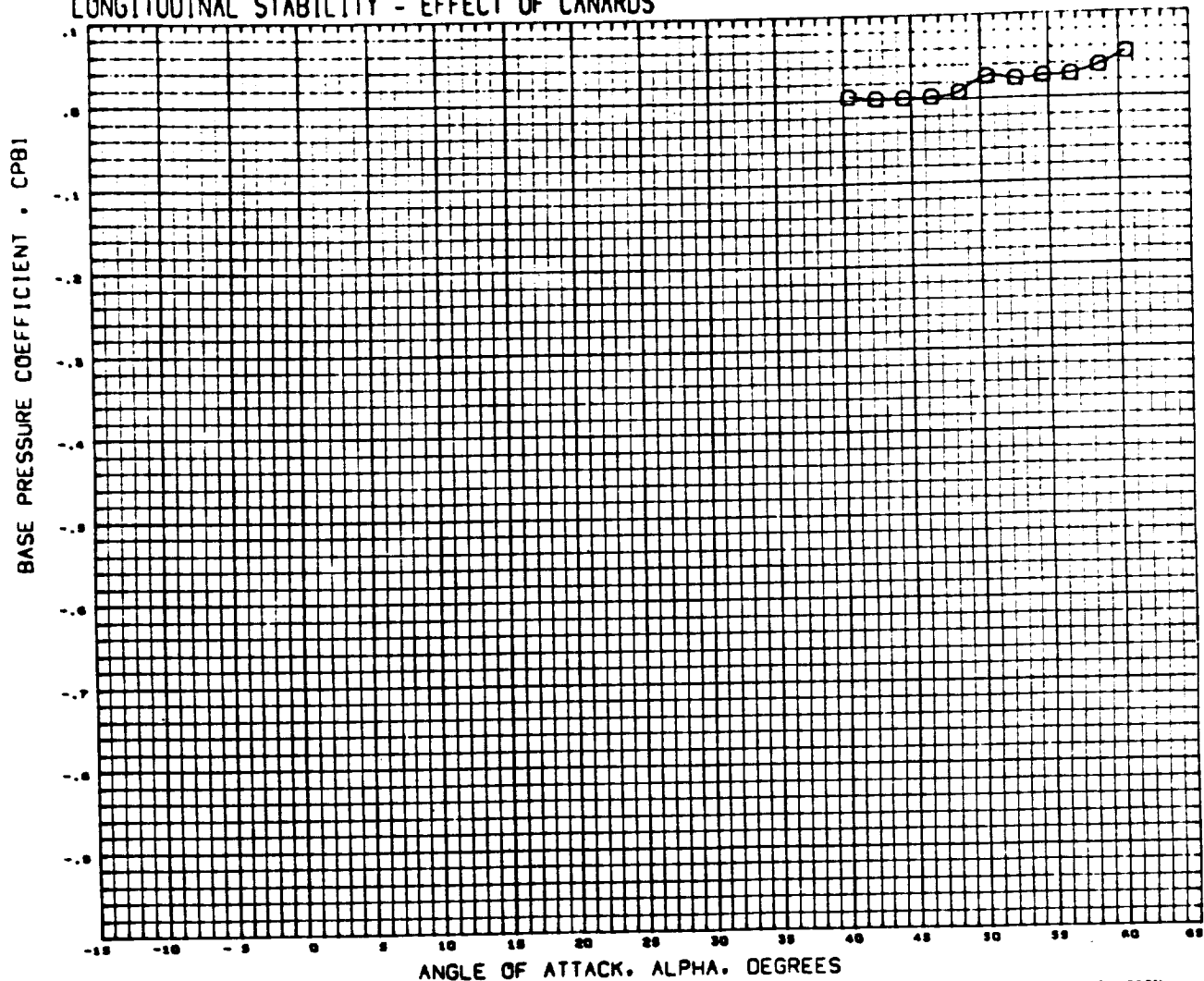
PARAMETRIC VALUES

REFERENCE INFORMATION
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 LREF 1.9340 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0023

DATA HIST. CODE *E

M496-MSFC AR11981-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 777

LONGITUDINAL STABILITY - EFFECT OF CANARDS



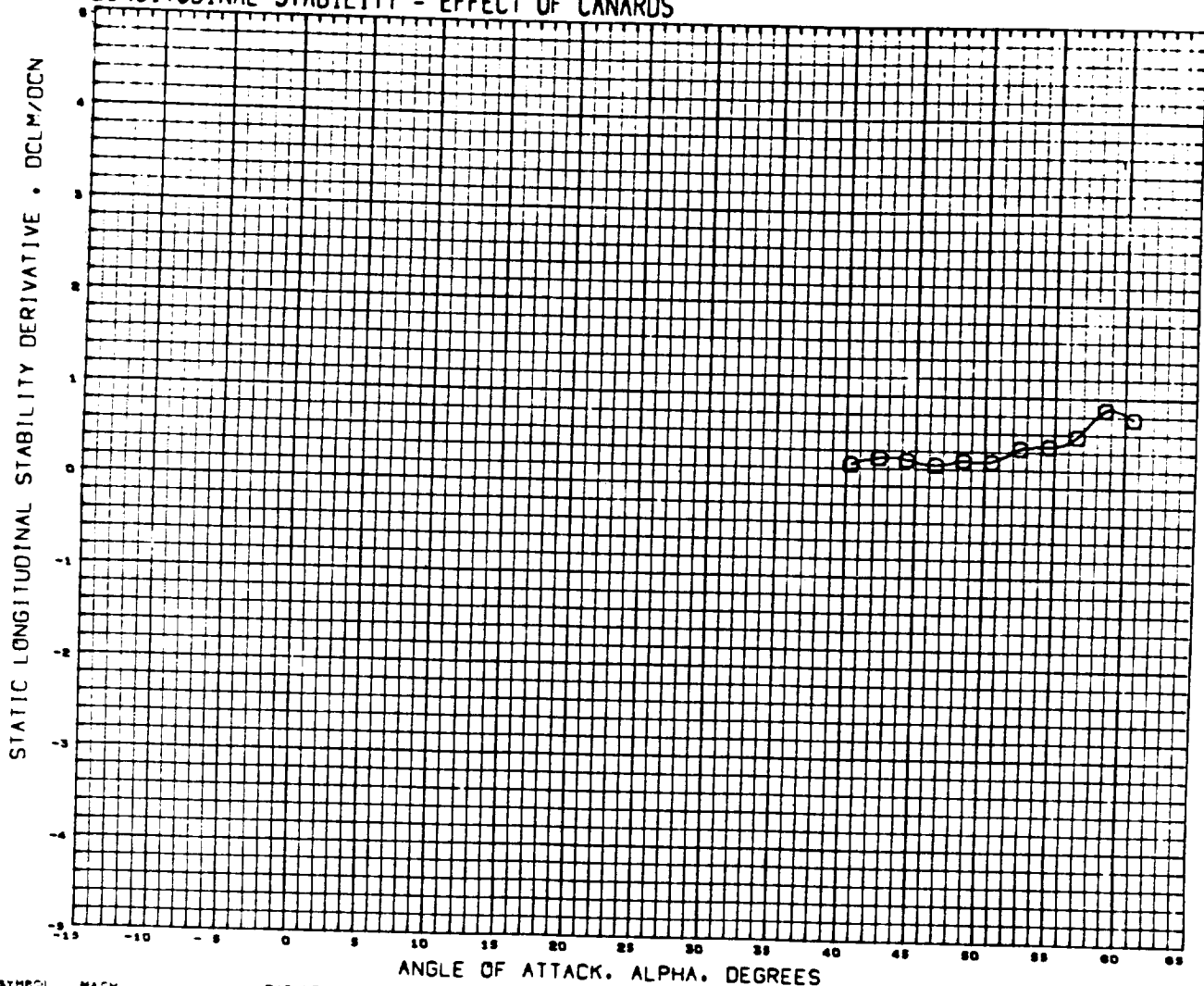
SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000

REFERENCE INFORMATION
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 LREP 1.5360 IN.
 QREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0021

DATA HIST. CODE 0E

M496-MSFC AR11981-3 MODEL W682C12V2 (E3821K) 06 SEP 72 PAGE 778

LONGITUDINAL STABILITY - EFFECT OF CANARDS

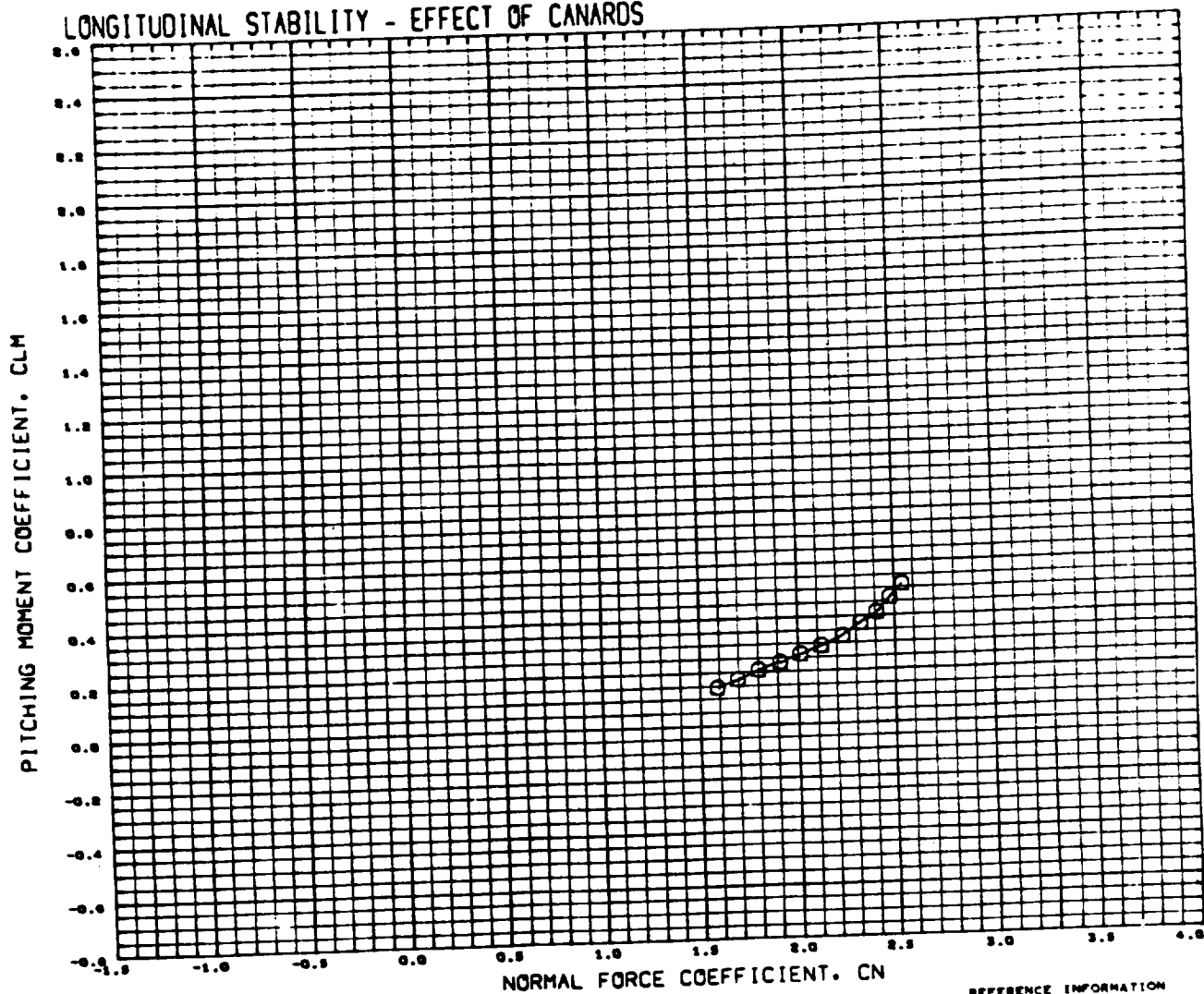


SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000

DATA HIST. CODE *E

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 GREF 4.3000 IN.
 YMRP 2.4000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025 IN.

LONGITUDINAL STABILITY - EFFECT OF CANARDS

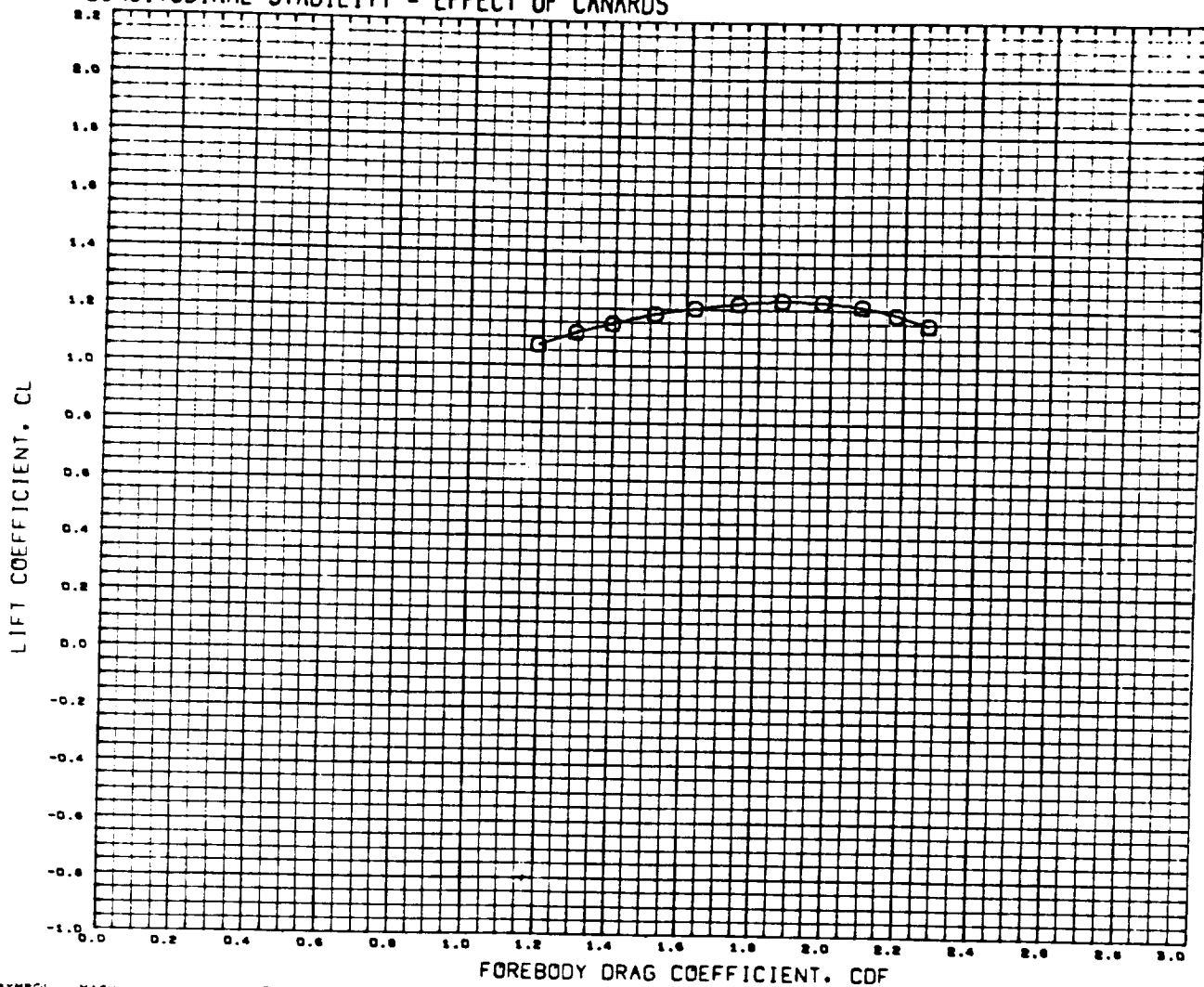


SYMBOL \bigcirc MACH 4.950 BETA 0.000 PARAMETRIC VALUES 0.000 CANARD - 60.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE *E
 M496-MSFC AR11981-3 MODEL W6B2C12V2 (E3821K) 06 SEP 72 PAGE 780

LONGITUDINAL STABILITY - EFFECT OF CANARDS



SYMBOL \bigcirc MACH 4.959 BETA 0.000 CANARD - 60.000
 PARAMETRIC VALUES

REFERENCE INFORMATION
 SREF 4.6225 30. IN.
 LREF 1.9360 IN.
 SREF 4.3000 IN.
 XNRP 2.4000 IN.
 YNRP 0.0000 IN.
 ZNRP 0.0000 IN.
 SCALE 0.0025 IN.

DATA HIST. CODE *E

A graph showing the relationship between ΔI (Amps) on the vertical axis and ΔI (Degrees) on the horizontal axis. The vertical axis ranges from -1.5 to 3.5 with major grid lines every 1.0 unit and minor grid lines every 0.2 units. The horizontal axis ranges from -15 to 65 with major grid lines every 5 units and minor grid lines every 1 unit. A curve is plotted, starting at approximately (0, 0.2), rising to a peak of about 0.95 at 18 degrees, and then slightly decreasing to about 0.85 at 20 degrees. The curve is marked with small 'x' symbols at each data point.

ΔI (Degrees)	ΔI (Amps)
0	0.2
2	0.3
4	0.4
6	0.5
8	0.6
10	0.7
12	0.8
14	0.85
16	0.9
18	0.95
20	0.85

DATA SET SYMBOL		CONFIGURATION DESCRIPTION			
(P30114)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		
(P30114)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		
(P30098)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		
(P30098)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		
(P30098)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		
(P30098)		4496-HSPC	AR11981-3	MODEL	4496V2
(P3007X)		DATA NOT AVAILABLE FOR	ALL CONDITIONS		

BETA	ELEVTR	ALIRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000		
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION		
SREP	4.0229	30. IN.
LREP	1.3367	IN.
BREP	4.3000	IN.
KMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0029	

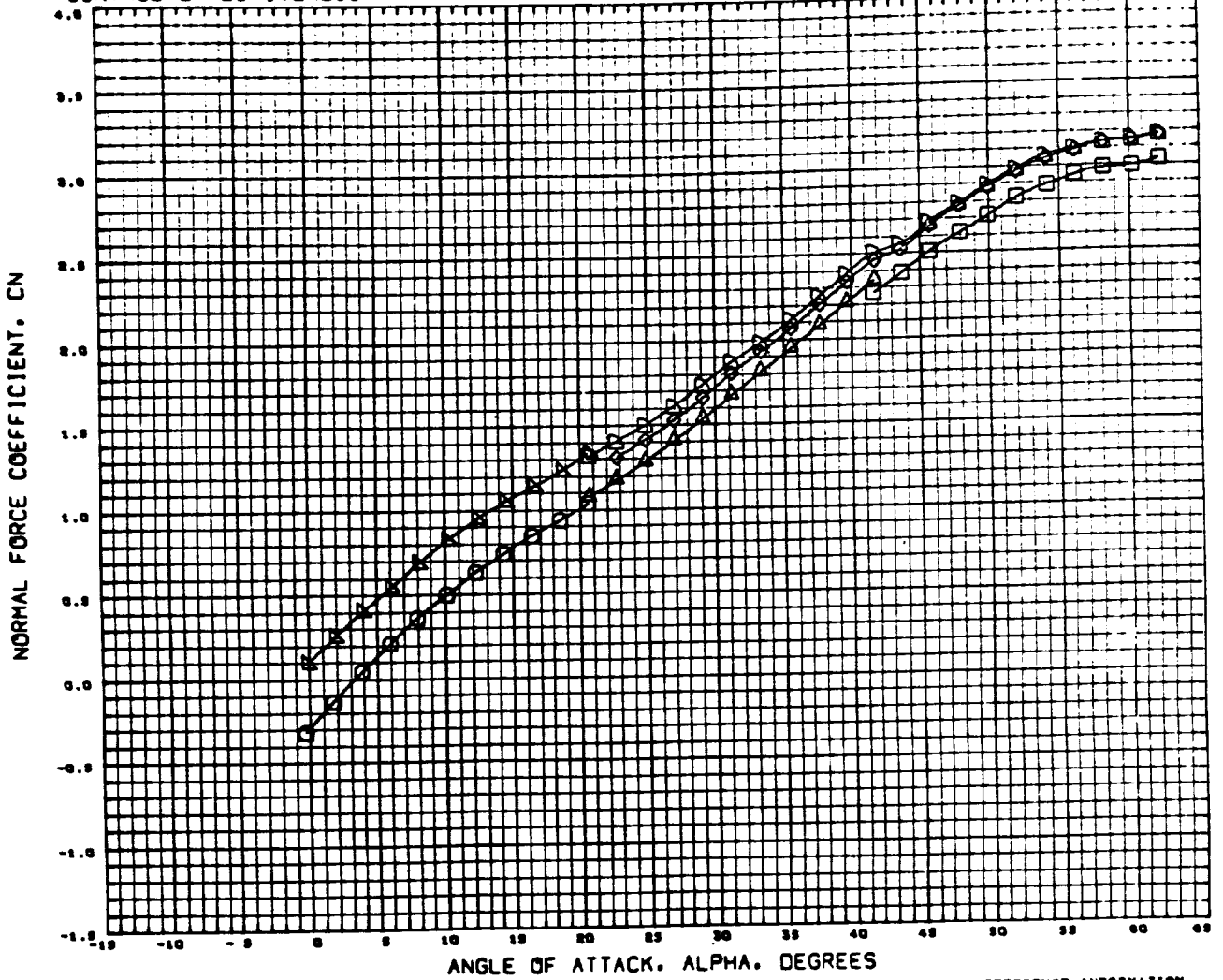
A graph showing the Normal Force Coefficient (C_N) versus the Angle of Attack (α) in degrees for a 10-degree half-angle cone. The y-axis ranges from -1.5 to 4.0, and the x-axis ranges from -15 to 65. The data points show a linear relationship passing through the origin.

Angle of Attack (α , degrees)	Normal Force Coefficient (C_N)
0	0.0
2	0.1
4	0.2
6	0.3
8	0.4
10	0.5
12	0.6
14	0.7
16	0.8
18	0.9
20	1.0
22	1.1
24	1.2
26	1.3
28	1.4
30	1.5
32	1.6
34	1.7
36	1.8
38	1.9
40	2.0
42	2.1
44	2.2
46	2.3
48	2.4
50	2.5
52	2.6
54	2.7
56	2.8
58	2.9
60	3.0
62	3.1
64	3.2

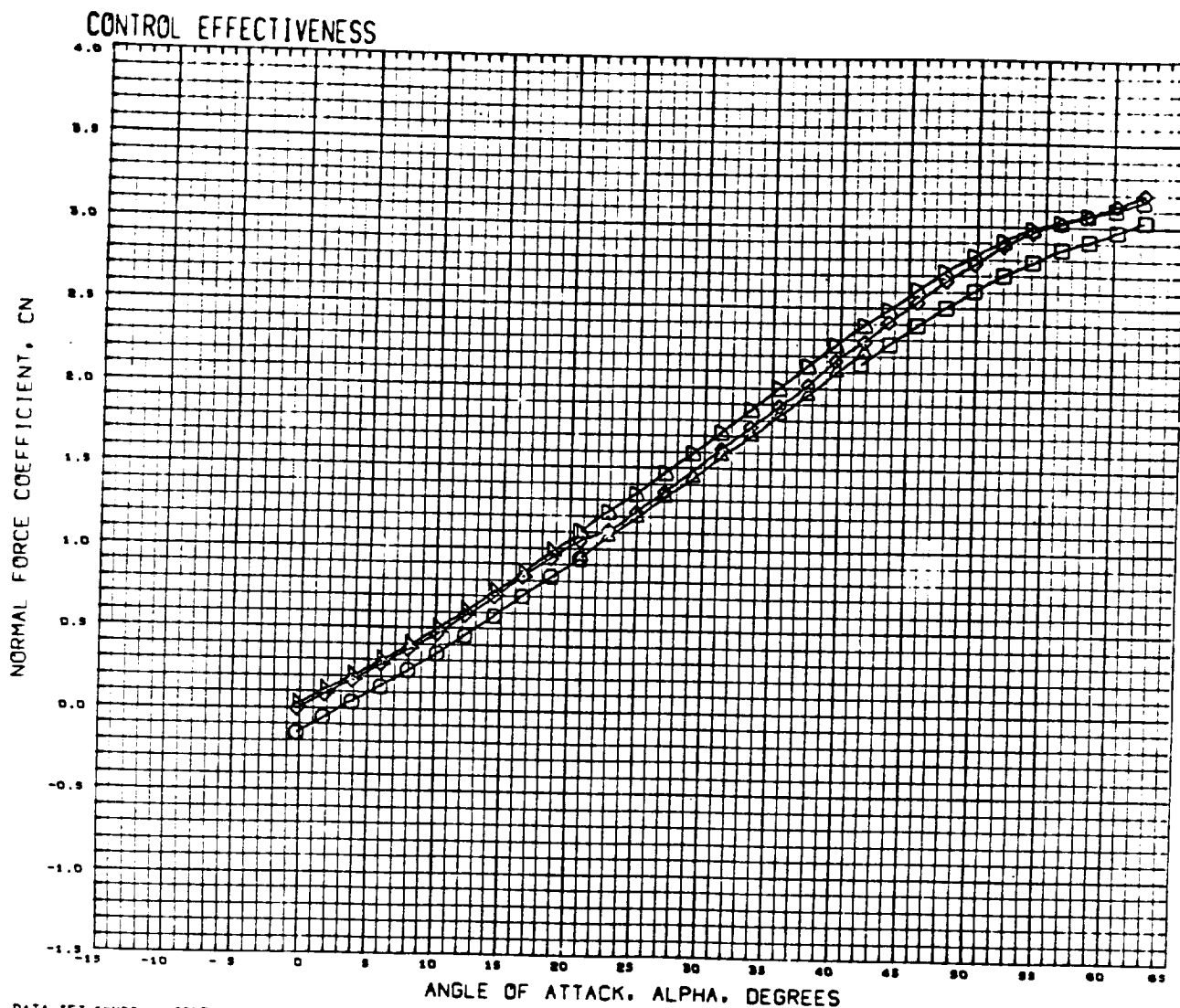
BETA	ELEVTR	ATLRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000		
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION		
SREF	4.8225	50.14.
LREF	1.5365	IN.
BREF	4.3000	IN.
ZMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	REFERENCE INFORMATION
(E3611A)	N496-N5FC AR11981-3 MODEL W882V2	0.000	-30.000	0.000	SREF 4.6225 50.1M.
(E3610H)	N496-N5FC AR11981-3 MODEL W882V2	0.000	-15.000	-15.000	LREF 1.5360 1M.
(F3609Z)	N496-N5FC AR11981-3 MODEL W882V2	0.000	0.000	0.000	BREF 4.3000 1M.
(E3610R)	N496-N5FC AR11981-3 MODEL W882V2	0.000	5.000	5.000	YNRP 2.4000 1M.
(E3606A)	N496-N5FC AR11981-3 MODEL W882V2	0.000	15.000	15.000	ZNRP 0.0000 1M.
(F3607Z)	N496-N5FC AR11981-3 MODEL W882V2	0.000	15.000	15.000	SCALE 0.0025
MACH 1.199					



DATA SET SYMBOL CONFIGURATION DESCRIPTION

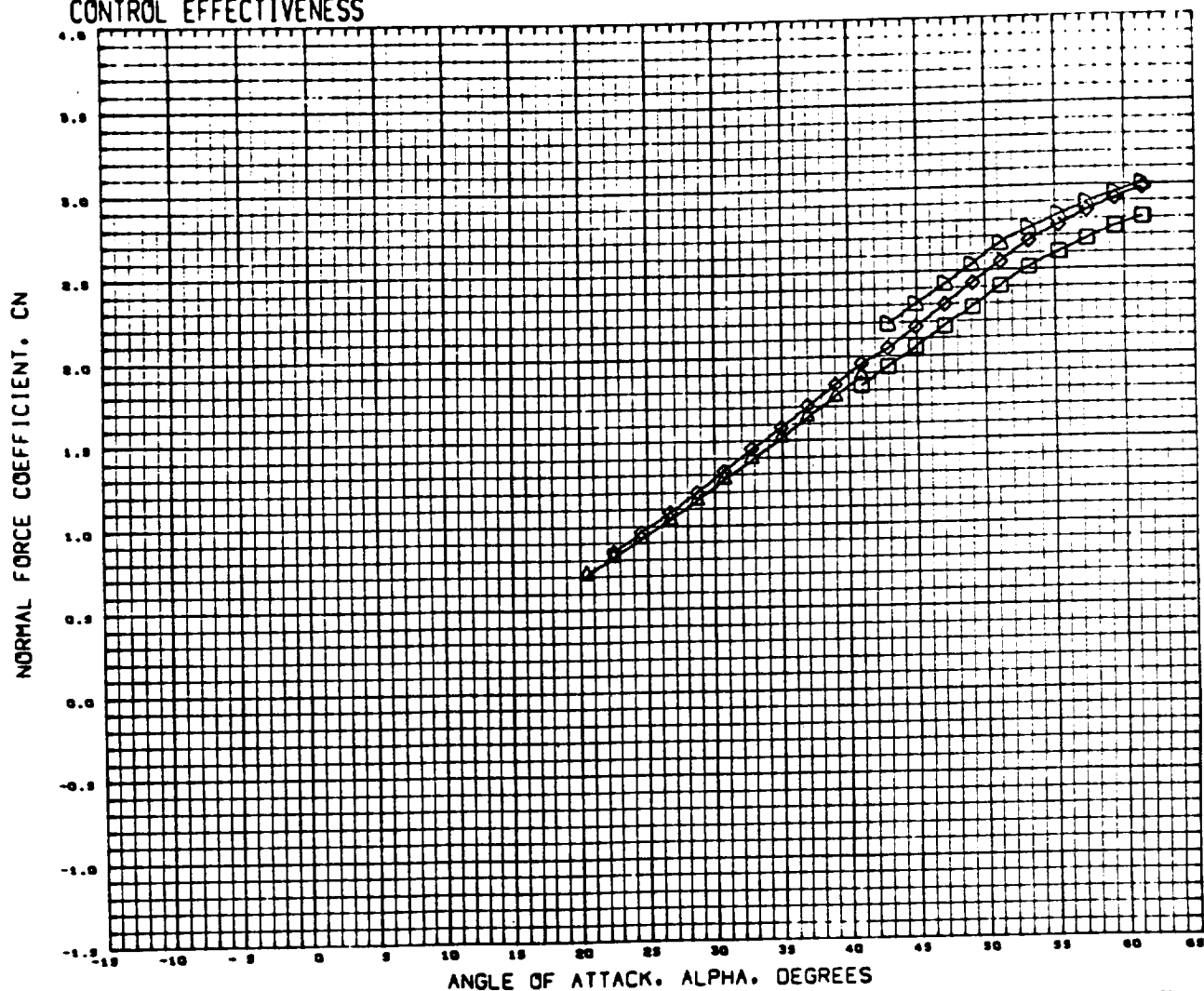
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(E3811A)	M496-HSFC AR11981-3 MODEL W82V2	0.000	-30.000	0.000
(E3812H)	M496-HSFC AR11981-3 MODEL W82V2	0.000	-15.000	-15.000
(F3802X)	M496-HSFC AR11981-3 MODEL W82V2	0.000	0.000	0.000
(E3812A)	M496-HSFC AR11981-3 MODEL W82V2	0.000	0.000	0.000
(E3802A)	M496-HSFC AR11981-3 MODEL W82V2	0.000	5.000	5.000
(F3802X)	M496-HSFC AR11981-3 MODEL W82V2	0.000	15.000	15.000

MACH 1.932

REFERENCE INFORMATION

SREF	4.6225	50. IN.
LREF	1.9360	IN.
BREF	4.3000	IN.
ZWRP	2.4000	IN.
YWRP	0.0000	IN.
ZWRP	0.0000	IN.
SCALE	0.0025	

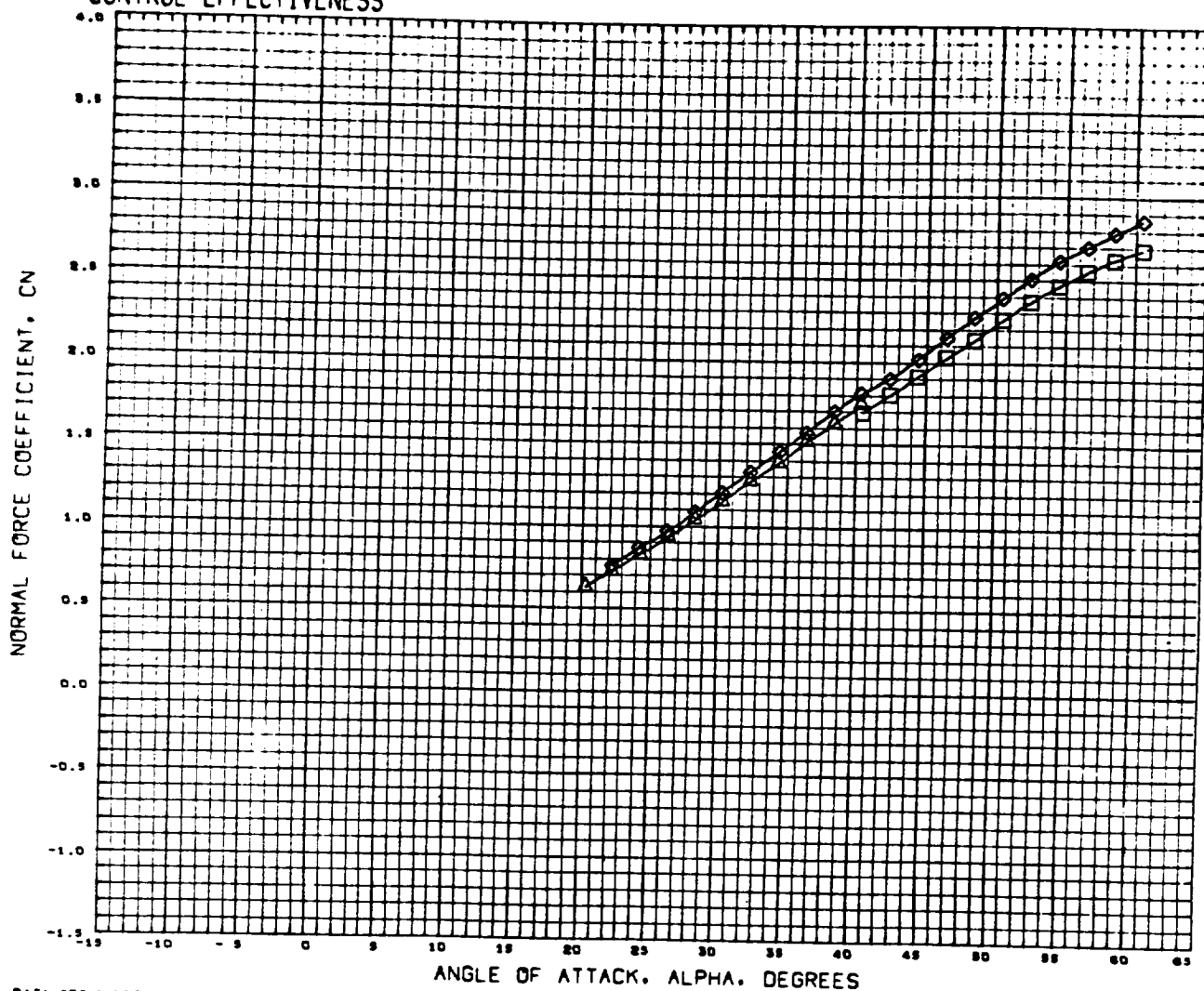
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLON	REFERENCE INFORMATION
(E3611A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.6225 IN.
(E3610M)	N496-HSFC AR11981-3 MODEL W682V2	0.000	-15.000	-15.000	LREP 1.3360 IN.
(F3609X)	N496-HSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	SREP 4.3000 IN.
(E3618X)	N496-HSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	XHRP 2.4000 IN.
(E3608A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	5.000	5.000	YHRP 0.3000 IN.
(F3607X)	N496-HSFC AR11981-3 MODEL W682V2	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0025

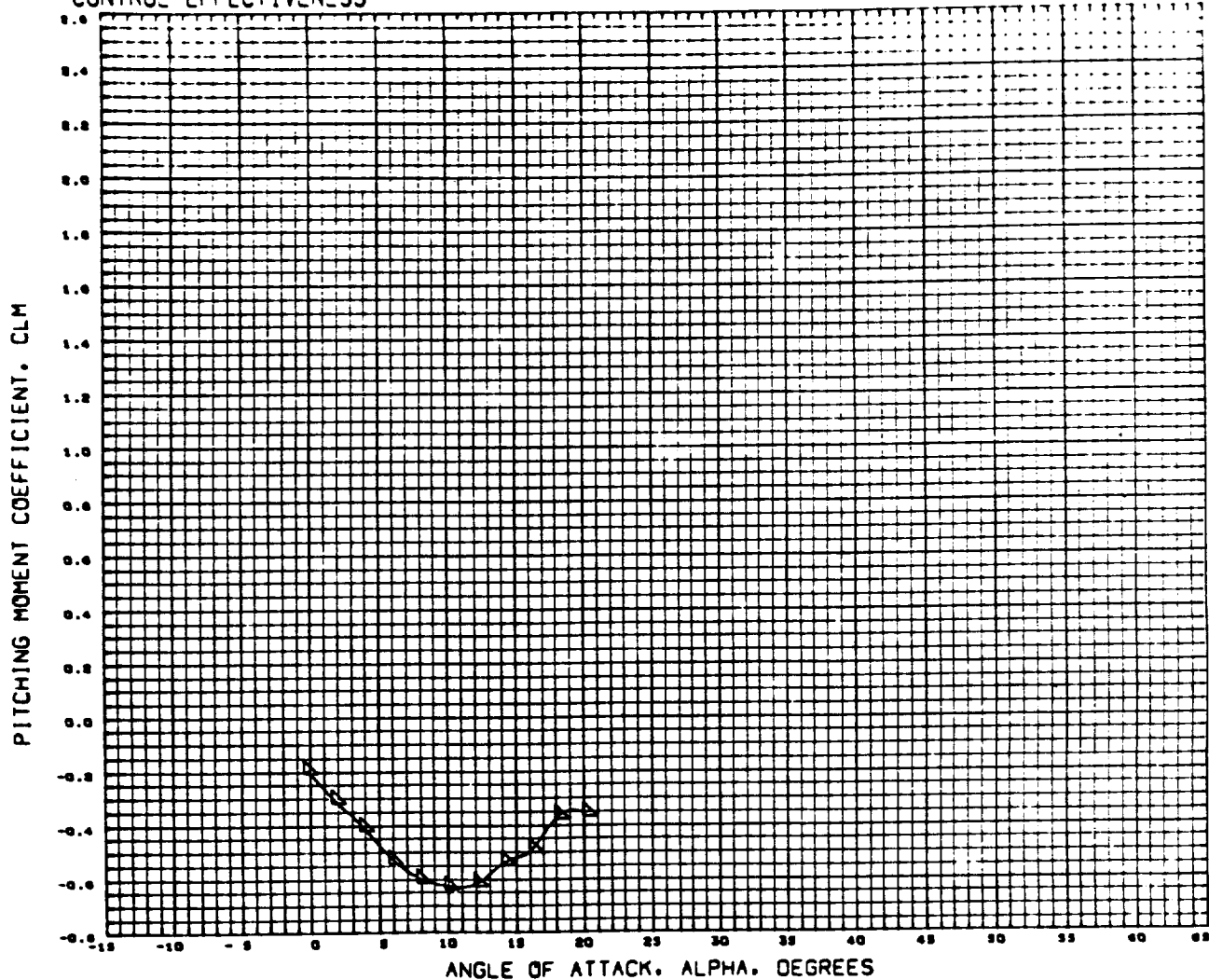
MACH 3.400

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3911A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	BREF 4.0225 50. IN.
(E3911B)	M496-MSFC AR11981-3 MODEL W682V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(F3909X)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3912A)	M496-MSFC AR11981-3 MODEL W682V2	0.000	5.000	5.000	ZNRP 2.4000 IN.
(E3905A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	VNRP 0.0000 IN.
(F3907X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZNRP 0.0000 IN.
	MACH 4.959				SCALE 0.0025 IN.

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3611A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3610H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(F3609Z)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3612K)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3608A)	M496-HSPC AIRCRAFT-3 MODEL W882VE
(F3607Z)	DATA NOT AVAILABLE FOR ALL CONDITIONS

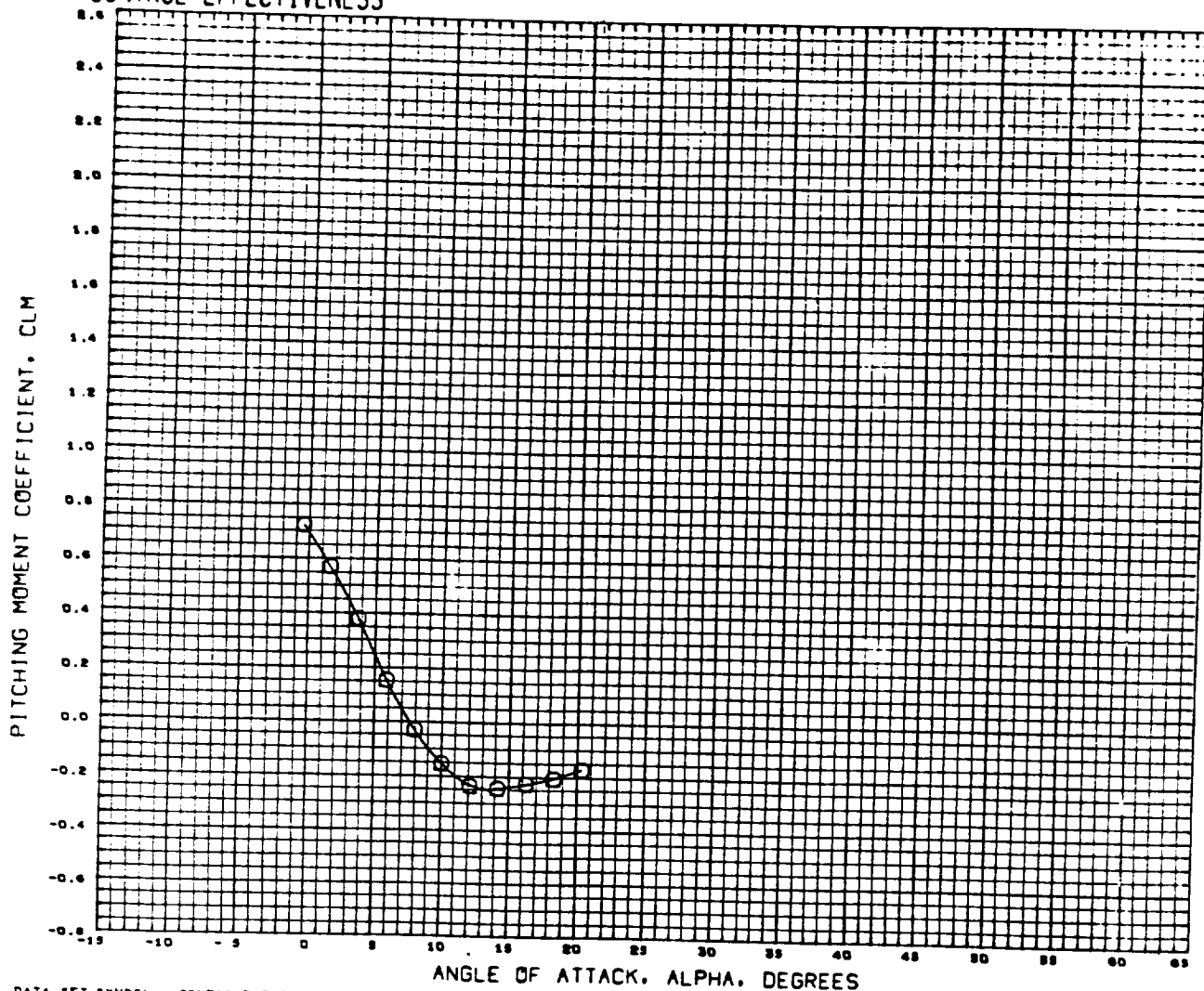
MACH

0.397

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	15.000	15.000

REFERENCE INFORMATION		
SREP	4.6225	32. IN.
LREP	1.9340	IN.
BREP	4.3000	IN.
YMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3811A) M496-MSFC AR11981-3 MODEL W882V2
 (E3810H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3812F) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3809A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

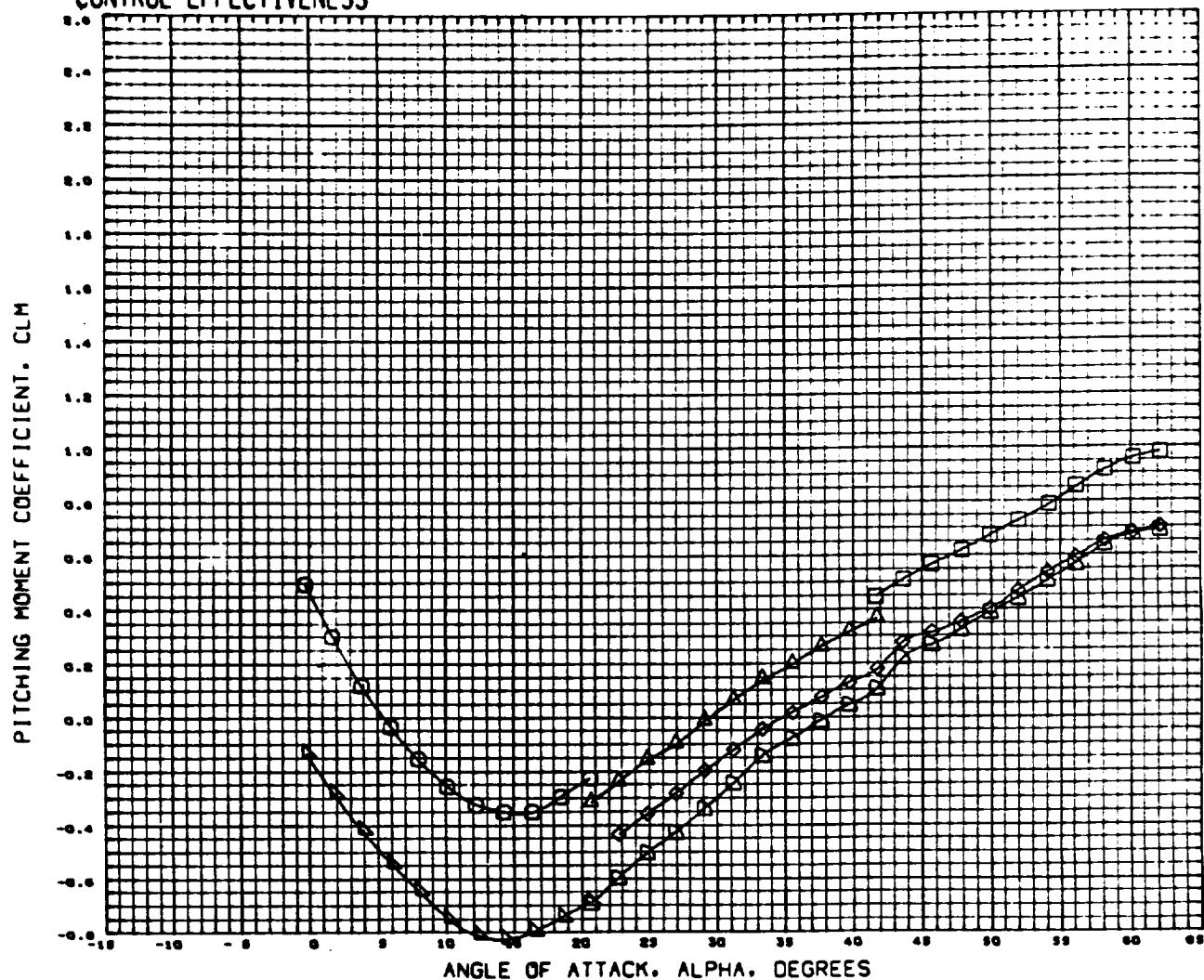
MACH 0.898

ANGLE OF ATTACK, ALPHA, DEGREES

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

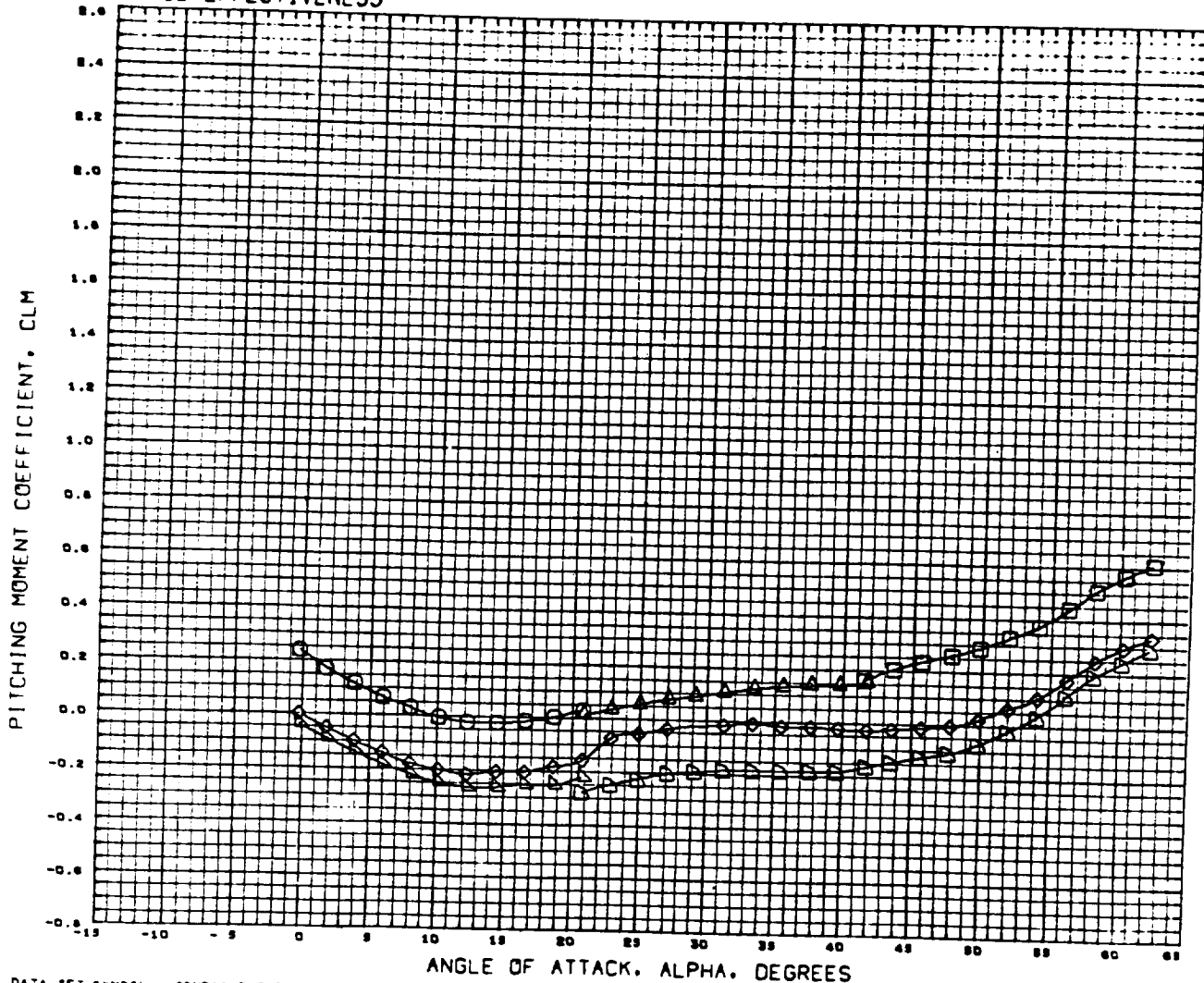
REFERENCE INFORMATION
 SREF 4.6225 80. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

CONTROL EFFECTIVENESS



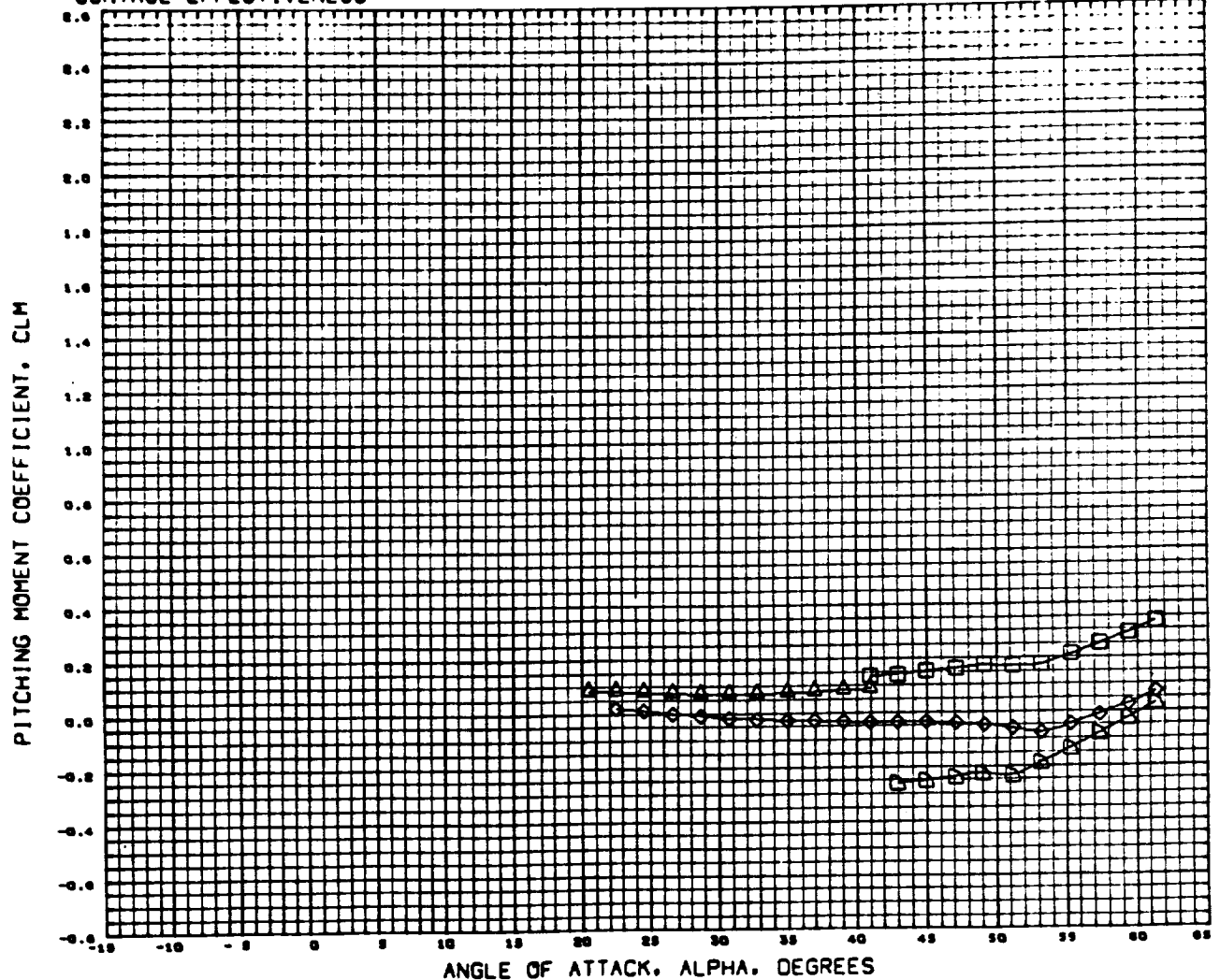
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION		
(E3011A)	M496-HSPC AR11981-3 MODEL W682V2	0.000	-30.000	0.000	SREF	4.6223	30. IN.
(E3010M)	M496-HSPC AR11981-3 MODEL W682V2	0.000	-15.000	-15.000	LREF	1.9363	IN.
(F3009X)	M496-HSPC AR11981-3 MODEL W682V2	0.000	0.000	0.000	SREF	4.3000	IN.
(E3012K)	M496-HSPC AR11981-3 MODEL W682V2	0.000	5.000	5.000	XMRP	2.4000	IN.
(E3009A)	M496-HSPC AR11981-3 MODEL W682V2	0.000	15.000	15.000	YMRP	0.0000	IN.
(F3007X)	M496-HSPC AR11981-3 MODEL W682V2	0.000	15.000	15.000	ZMRP	0.0000	IN.
					SCALE	0.0025	
MACH 1.199							

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3R11A)	M496-MSFC AR11981-3 MODEL W622V2	0.000	-30.000	0.000	BREF 4.0225 50. IN.
(E3R10H)	M496-MSFC AR11981-3 MODEL W622V2	0.000	-15.000	-15.000	LREF 1.5360 1N.
(F3R09X)	M496-MSFC AR11981-3 MODEL W622V2	0.000	0.000	0.000	BREF 4.3000 1N.
(E3R12I)	M496-MSFC AR11981-3 MODEL W622V2	0.000	5.000	5.000	XMRP 2.4000 1N.
(E3R04A)	M496-MSFC AR11981-3 MODEL W622V2	0.000	15.000	15.000	YMRP 0.0000 1N.
(F3R07X)	M496-MSFC AR11981-3 MODEL W622V2	0.000	15.000	15.000	ZMRP 0.0000 1N.
	MACH 1.932				SCALE 0.0025

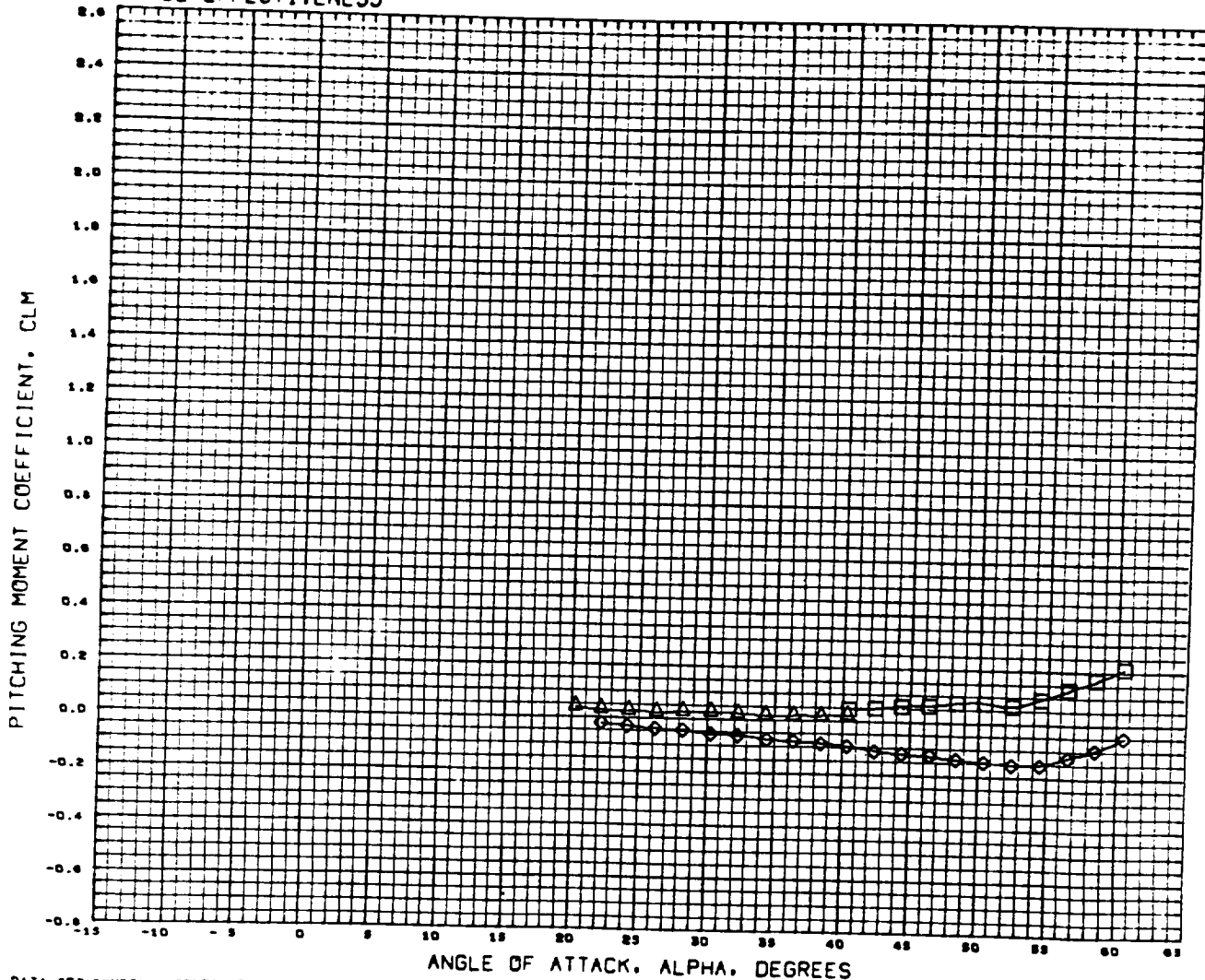
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.0225 33. IN.
(E3010H)	N496-MSFC AR11981-3 MODEL W682V2	0.000	-15.000	-15.000	LRFP 1.3360 IN.
(F3009X)	N496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	BRFP 4.3000 IN.
(E3012K)	N496-MSFC AR11981-3 MODEL W682V2	0.000	5.000	5.000	YMRP 2.4000 IN.
(E3009A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP 0.0000 IN.
(F3007X)	N496-MSFC AR11981-3 MODEL W682V2	0.000	15.000	15.000	SCALE 0.0025

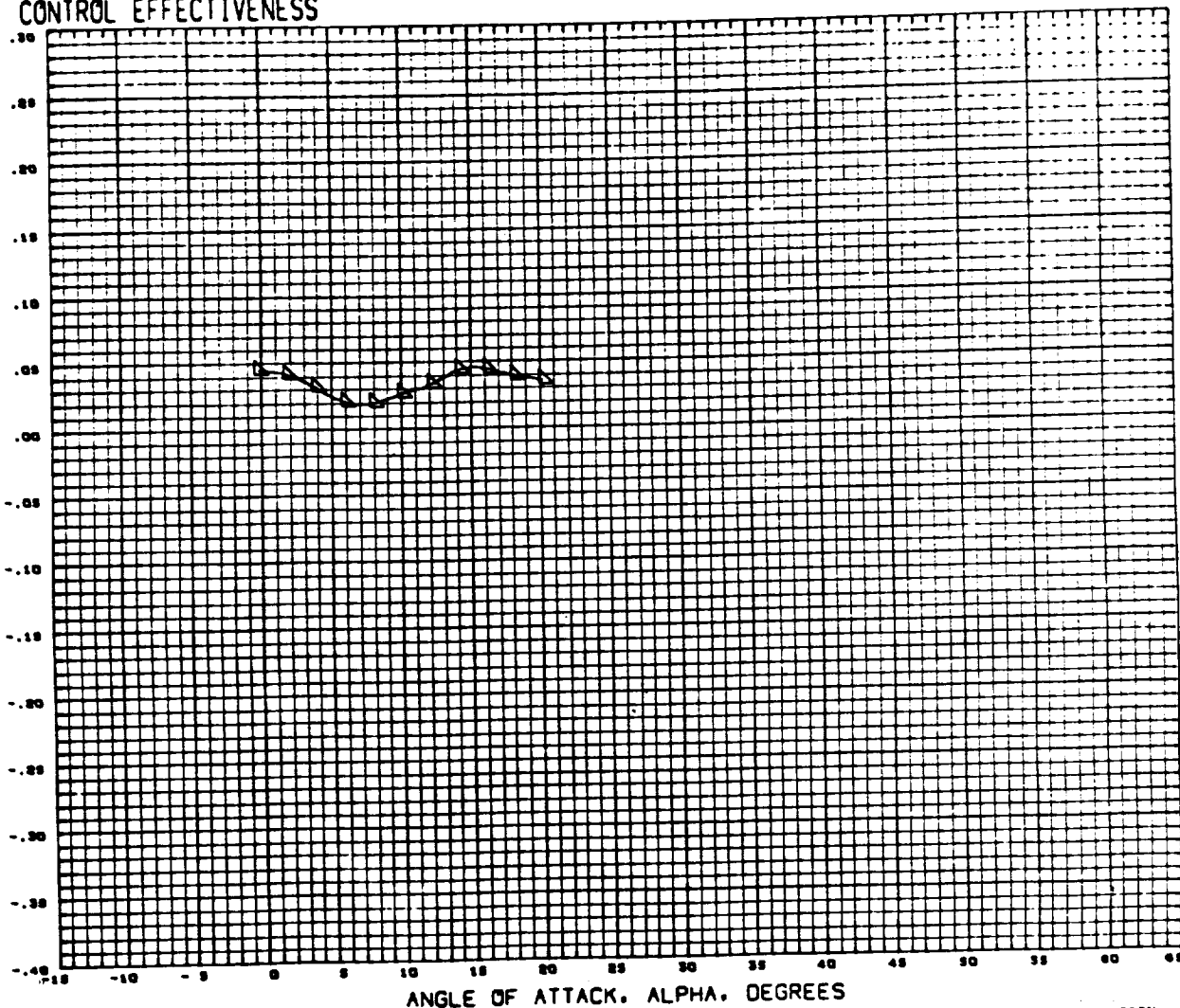
MACH 3.480

CONTROL EFFECTIVENESS



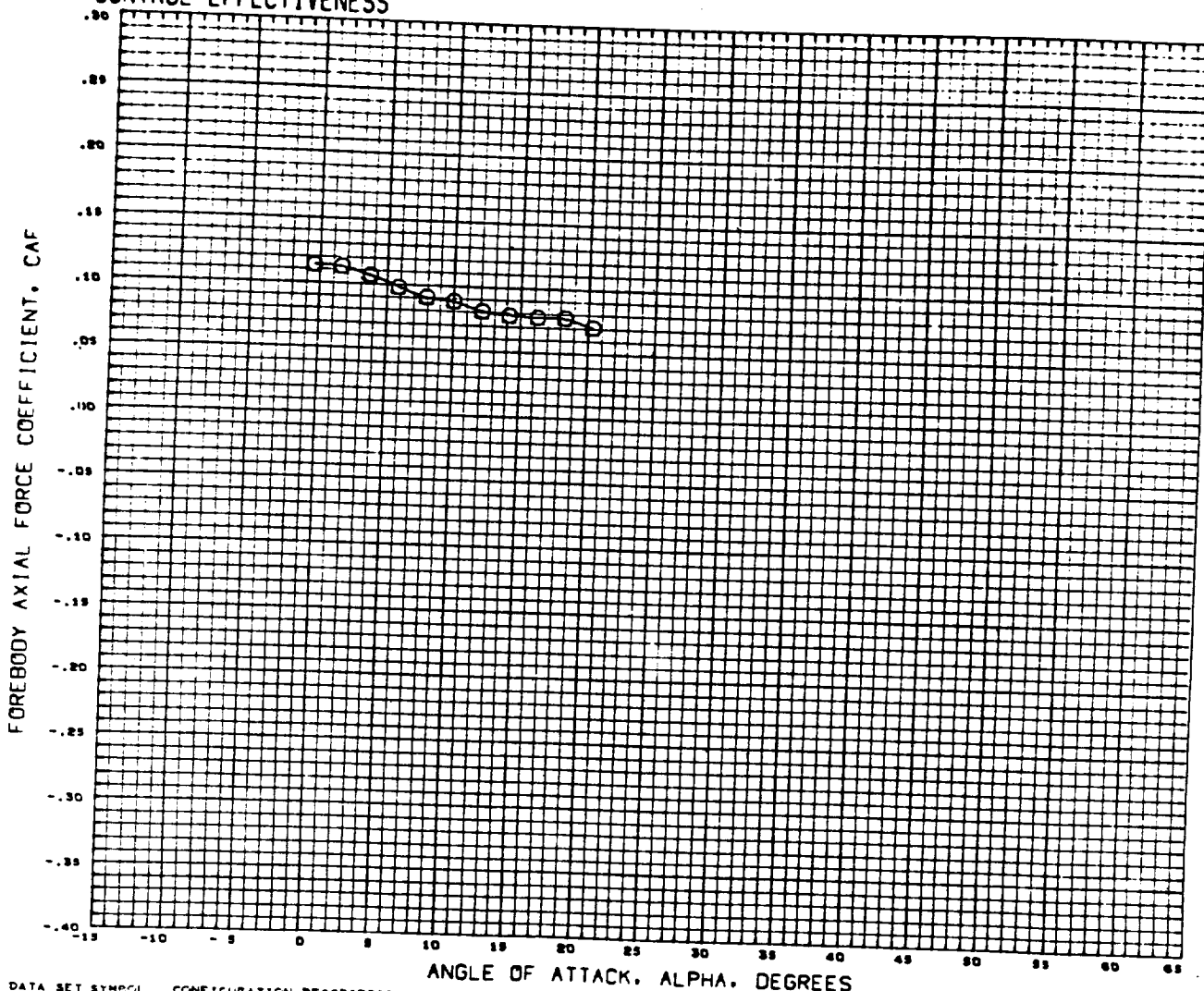
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3811A)		DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	BREF 4.6225 SQ. IN.
(E3810M)		M496-MSFC AR11981-3 MODEL W82V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(F3809X)		M496-MSFC AR11981-3 MODEL W82V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3812K)		M496-MSFC AR11981-3 MODEL W82V2	0.000	5.000	5.000	ZMRP 2.4000 IN.
(E3808A)		DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3807X)		DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000			ZMRP 0.0000 IN.
		MACH 4.959				SCALE 0.0025

FOREBODY AXIAL FORCE COEFFICIENT, CAF



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AIRRON	REFERENCE INFORMATION	
(E3811A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SRFP	4.6225 SQ. IN.
(E3813M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LRFP	1.5360 IN.
(E3808Y)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BRFP	4.3000 IN.
(E3812K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000			XRMP	2.4000 IN.
(E3809A)	H498-HSPC AR11981-3 MODEL WBBZVZ	0.000	9.000	5.000	YHRP	0.0000 IN.
(E3809B)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZHRP	0.0000 IN.
(E3809E)					SCALE	0.0025
NACH		0.597				

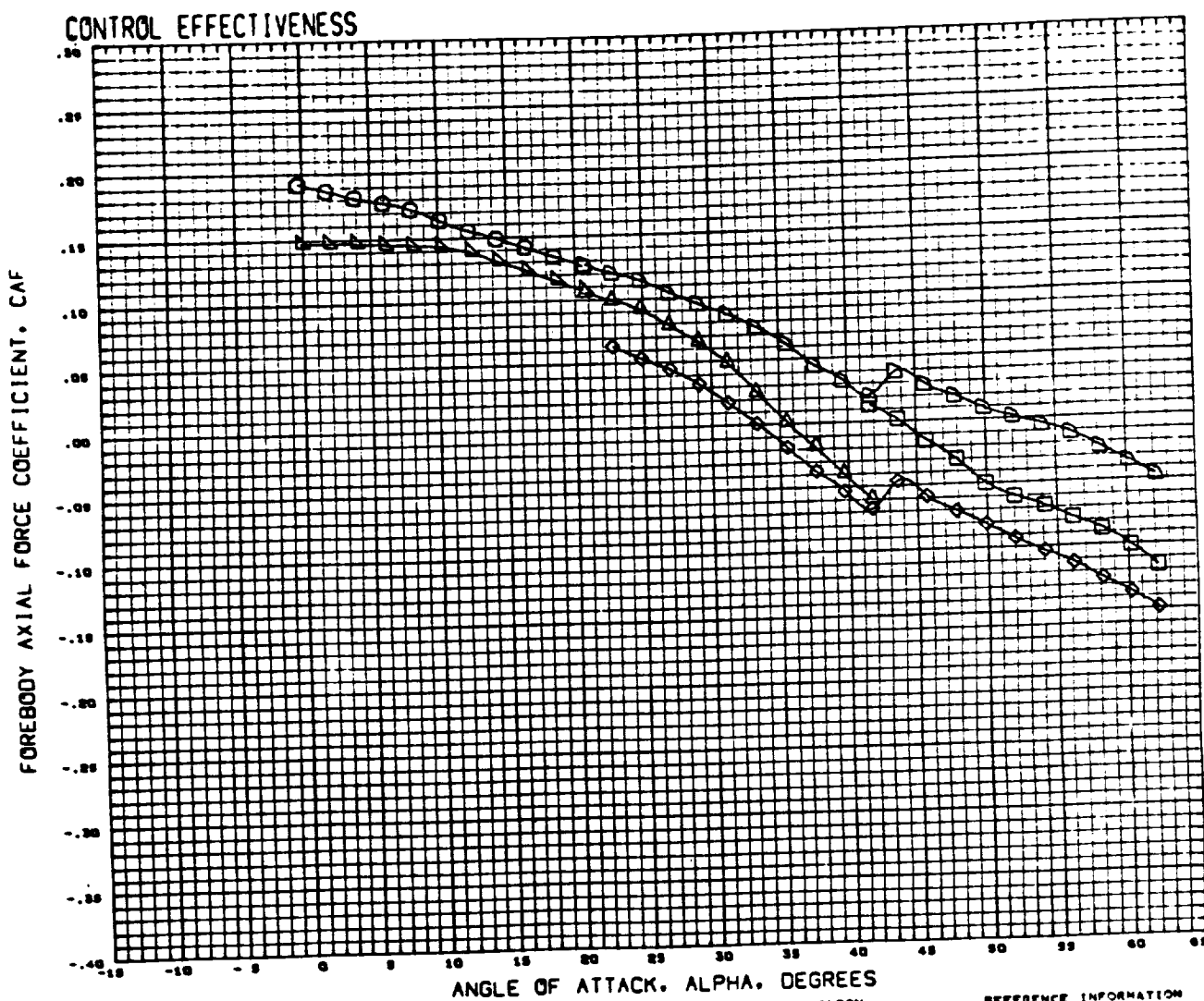
CONTROL EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3911A) M496-MSFC AR11981-3 MODEL W82V2
 (E3912H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3909X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3912K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3909A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3907X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 MACH 0.898

BETA	ELEVTR	ATTNOM
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

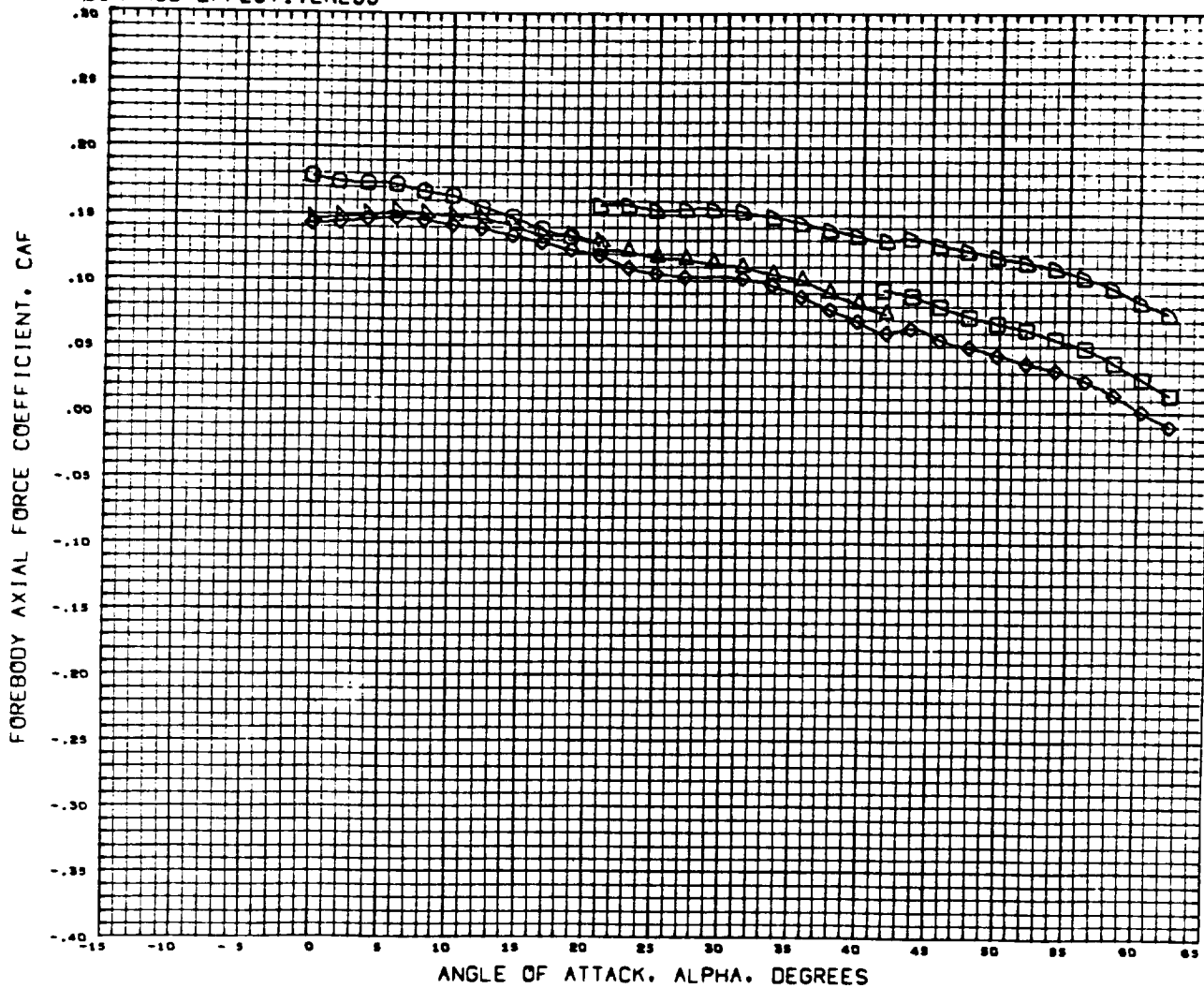
REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
QREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	M496-MSFC AR11981-3 MODEL W882V2	0.000	-30.000	0.000	SREP 4.6225 50. IN.
(E3010H)	M496-MSFC AR11981-3 MODEL W882V2	0.000	-15.000	-15.000	LRFP 1.5360 IN.
(P3000R)	M496-MSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	BRFP 4.3500 IN.
(E3012R)	M496-MSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000	XHRP 2.4000 IN.
(E3009A)	M496-MSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	YHRP 0.0000 IN.
(P3007R)	M496-MSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0025

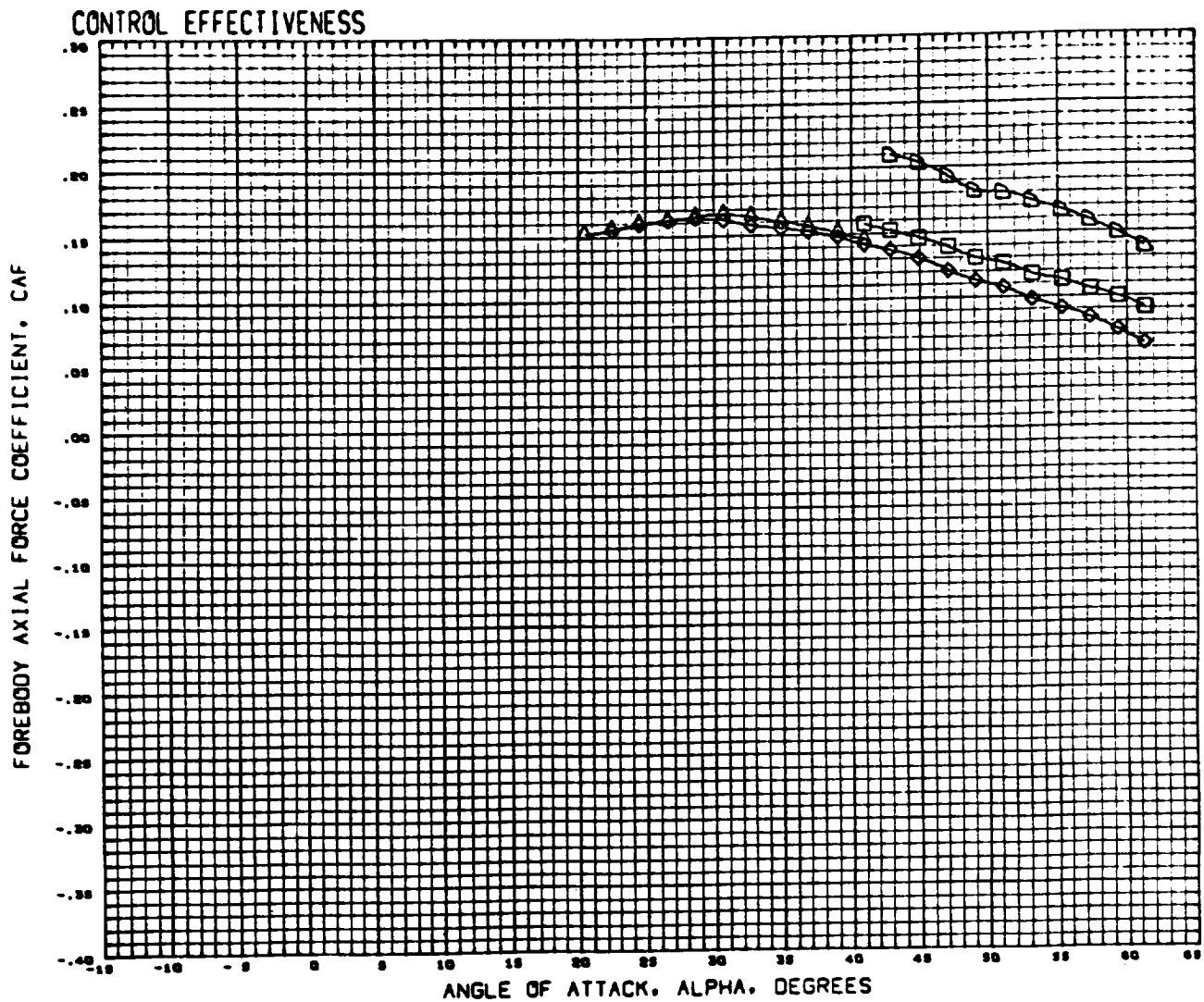
MACH 1.199

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3411A)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	-30.000	0.000	SREF 4.6225 50. IN.
(E3510H)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	-19.000	-19.000	LREF 1.9360 IN.
(F3409X)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	0.000	0.000	SREF 4.3000 IN.
(E3412X)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	5.000	5.000	XHRP 2.4000 IN.
(E3409A)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	19.000	19.000	YHRP 0.0000 IN.
(F3407X)	M496-MSFC AR11961-3 MODEL W6B2V2	0.000	19.000	19.000	ZHRP 0.0000 IN.
					SCALE 0.0025

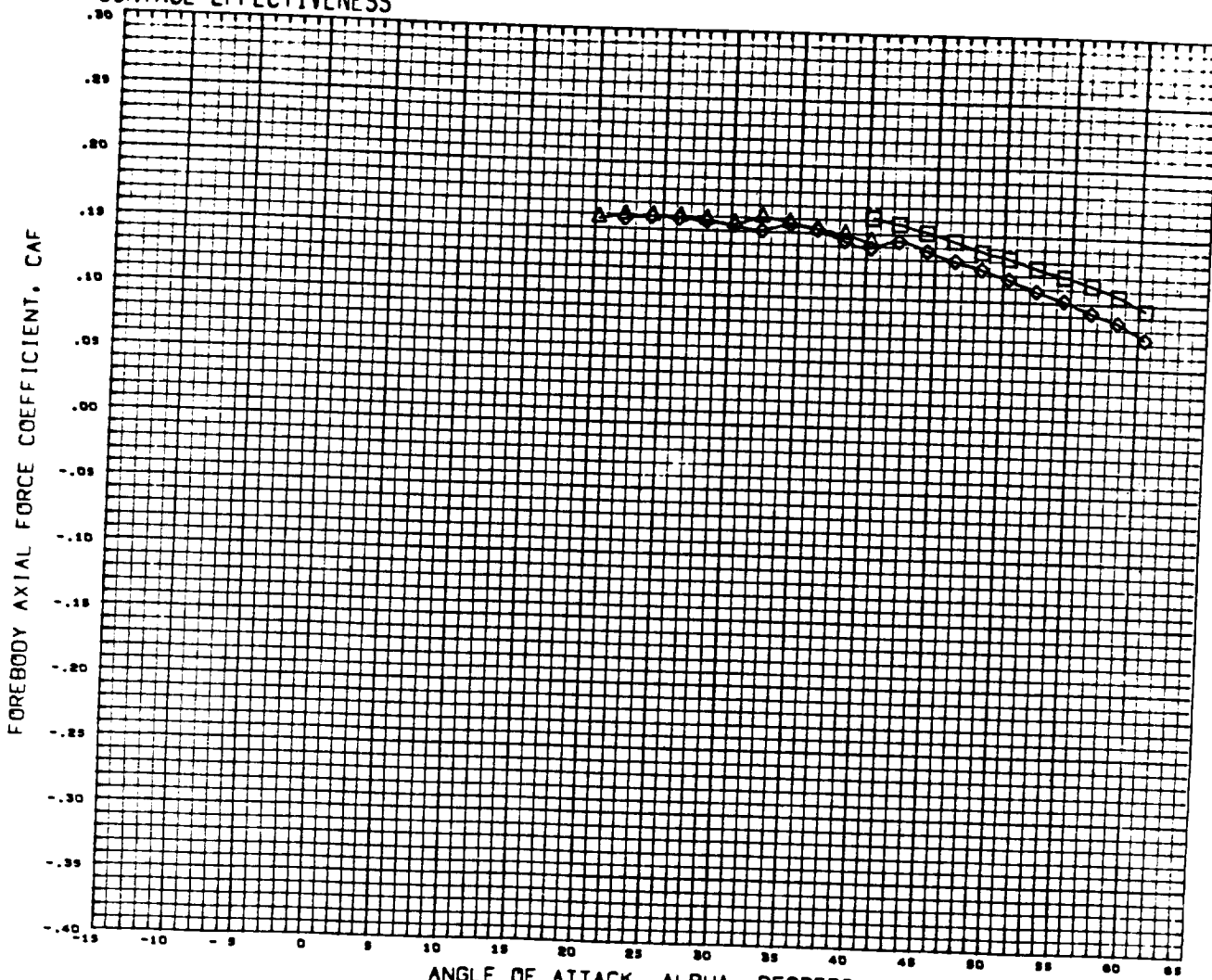
MACH 1.952



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.6225 SQ. IN.
(E3010M)	M496-HSFC AR11901-3 MODEL W882V2	0.000	-15.000	-15.000	LREP 1.9360 IN.
(F3009X)	M496-HSFC AR11901-3 MODEL W882V2	0.000	0.000	0.000	SREP 4.3000 IN.
(E3012A)	M496-HSFC AR11901-3 MODEL W882V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3008A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3007X)	M496-HSFC AR11901-3 MODEL W882V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

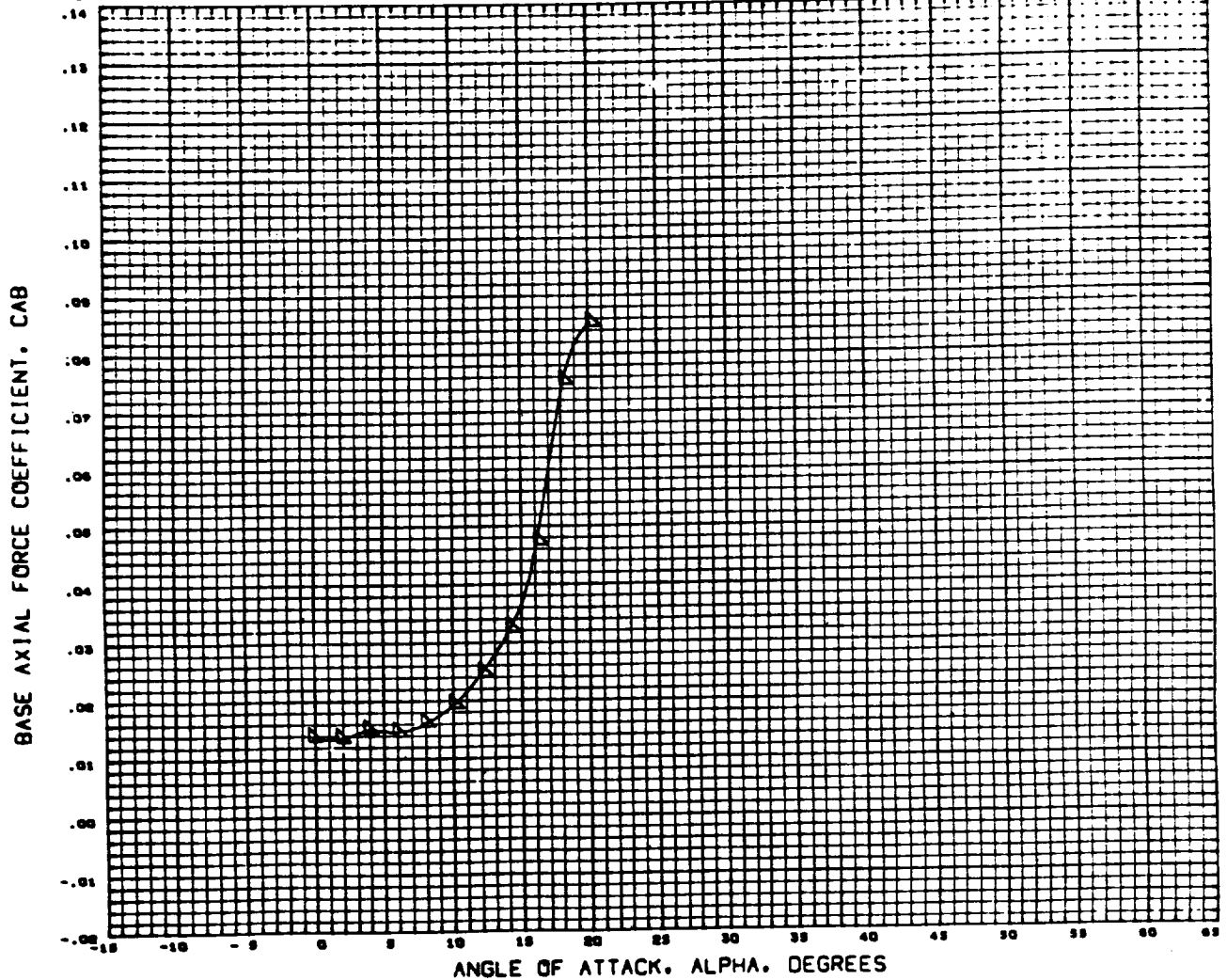
MACH 3.400

CONTROL EFFECTIVENESS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SRFP 4.6225 IN.
(E3010H)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LRFP 1.5360 IN.
(F3009X)	○	M496-MSFC AR11981-3 MODEL W8B2V2	0.000	0.000	0.000	SRFP 4.3000 IN.
(E3012K)	○	M496-MSFC AR11981-3 MODEL W8B2V2	0.000	0.000	0.000	XRFP 2.4000 IN.
(E3008A)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	5.000	5.000	YRFP 0.0000 IN.
(F3007X)	○	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZRFP 0.0000 IN.
		MACH 4.959				SCALE 0.0025

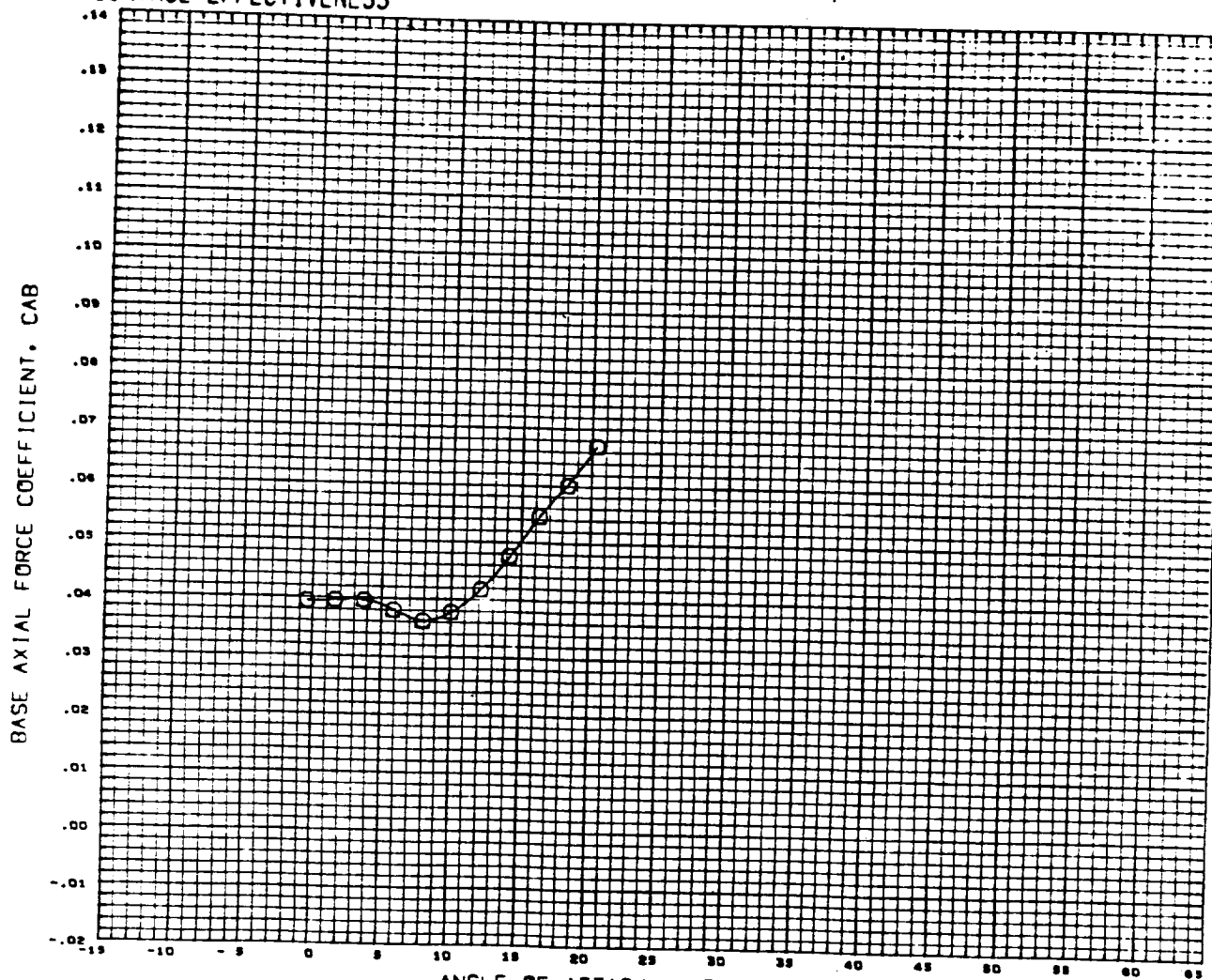
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SRFP 4.6225 IN.
(E3010H)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LRFP 1.5360 IN.
(F3009Z)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BRFP 4.3000 IN.
(E3012K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	XRFP 2.4000 IN.
(E3008A)	H456-H5PC AR11981-3 MODEL W882V8	0.000	5.000	5.000	YHRP 0.0000 IN.
(F3007Z)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0225

MACH 0.597

CONTROL EFFECTIVENESS



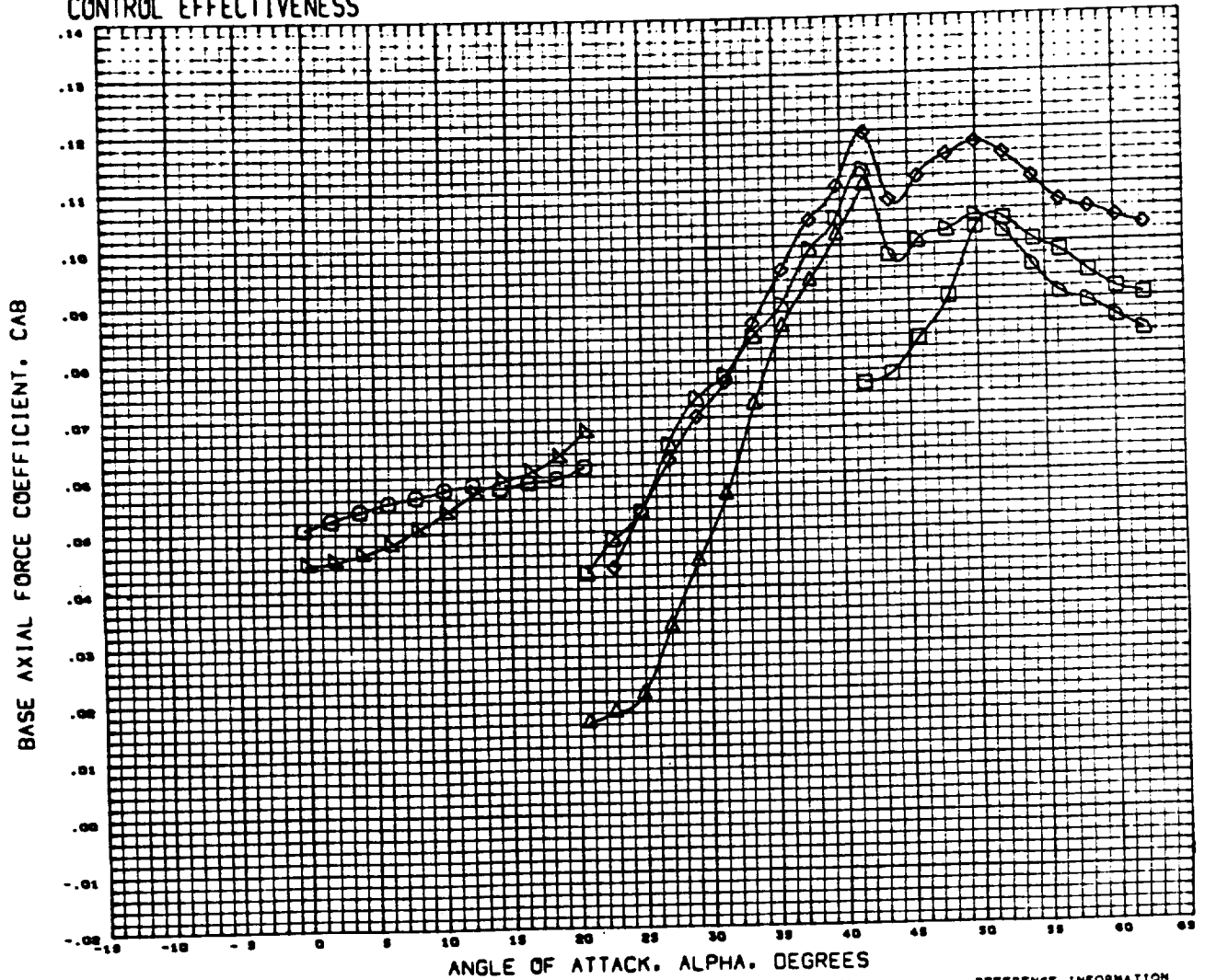
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3811A) M496-M3FC AR11001-3 MODEL W082V2
 (E3810H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3812) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3808A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 0.698

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	15.000	15.000
0.000	30.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 QREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

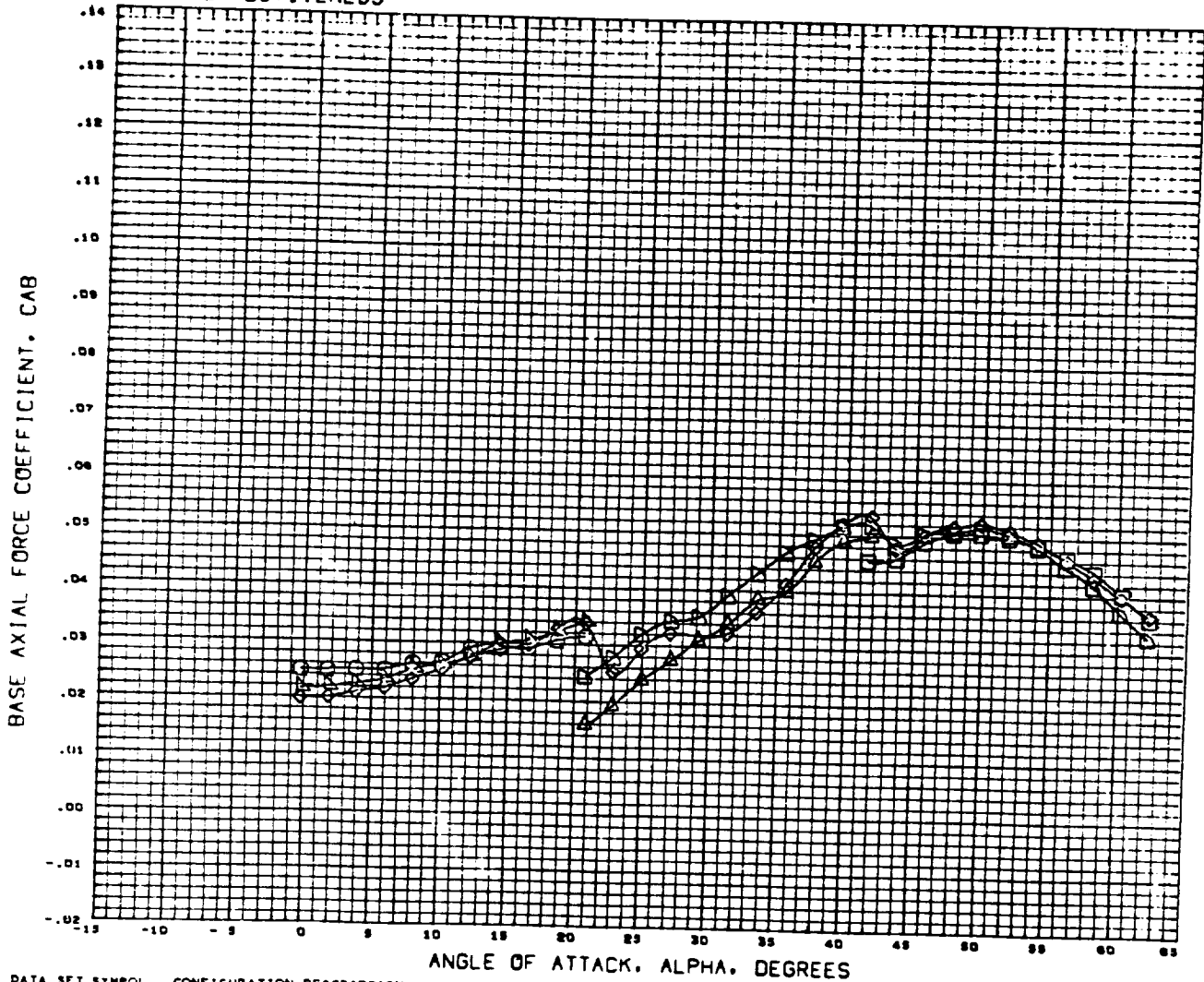
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3611A)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	-30.000	0.000	SREF 4.6225 53. IN.
(E3610N)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(P3609X)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3612K)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	5.000	5.000	YHPP 2.4000 IN.
(E3609A)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	15.000	15.000	YHPP 0.0000 IN.
(P3607X)	N496-HSPC AR11981-3 MOCEL W682V2	0.000	15.000	15.000	ZHPP 0.0000 IN.
					SCALE 0.0025

MACH 1.199

CONTROL EFFECTIVENESS



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(E3411A)	○	M496-MSFC AR11981-3 MODEL W62V2
(E3410H)	○	M496-MSFC AR11981-3 MODEL W62V2
(F3409Y)	○	M496-MSFC AR11981-3 MODEL W62V2
(E3412K)	○	M496-MSFC AR11981-3 MODEL W62V2
(E3404A)	○	M496-MSFC AR11981-3 MODEL W62V2
(F3407X)	○	M496-MSFC AR11981-3 MODEL W62V2

MACH 1.952

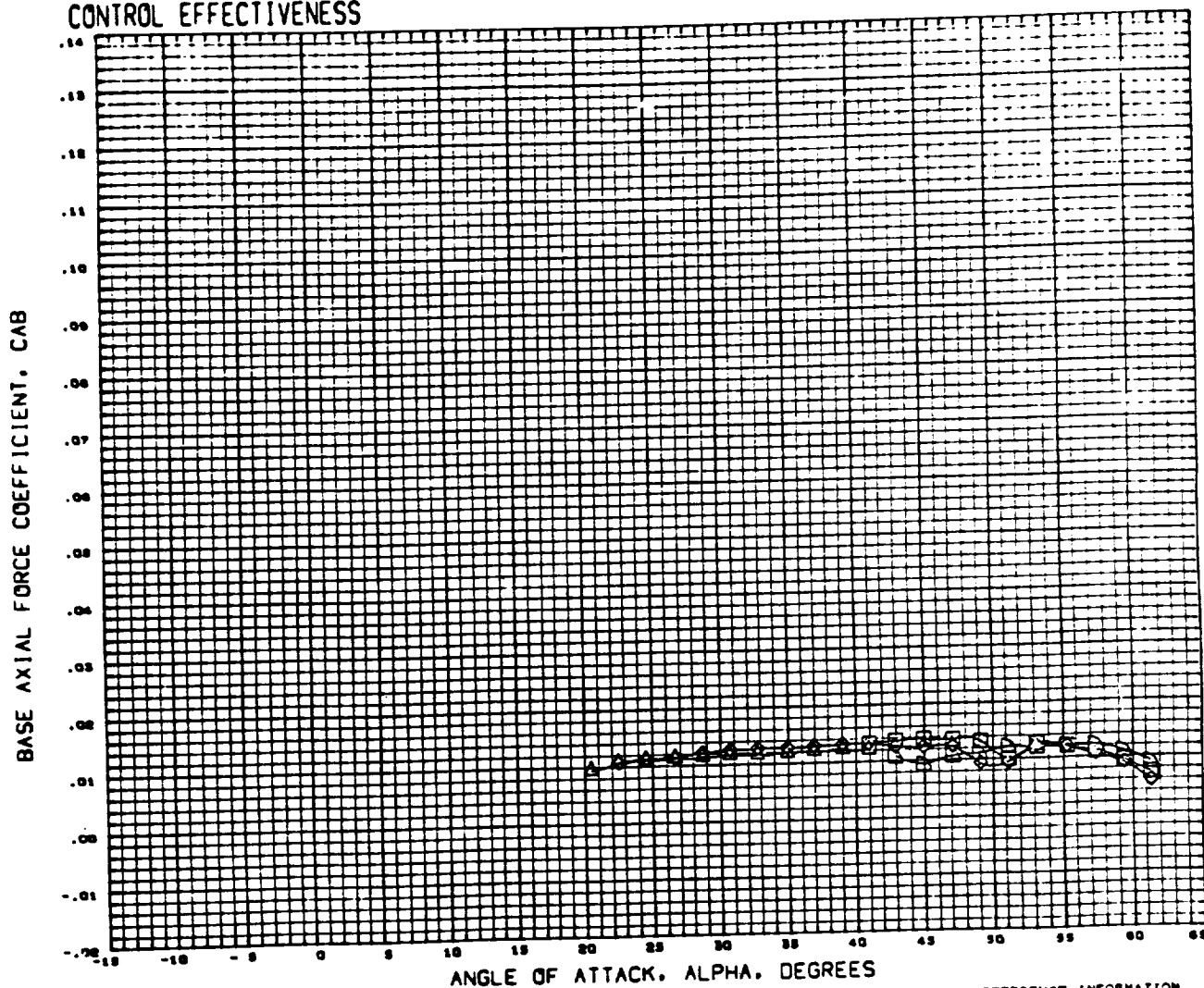
ANGLE OF ATTACK, ALPHA, DEGREES

BETA	ELEVTR	ATLON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	9.000	9.000
0.000	15.000	15.000

REFERENCE INFORMATION

SRP	4.0225	50.1N.
LRP	1.5360	IN.
SRP	4.3000	IN.
YMRP	2.4000	IN.
YMRP	0.0025	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



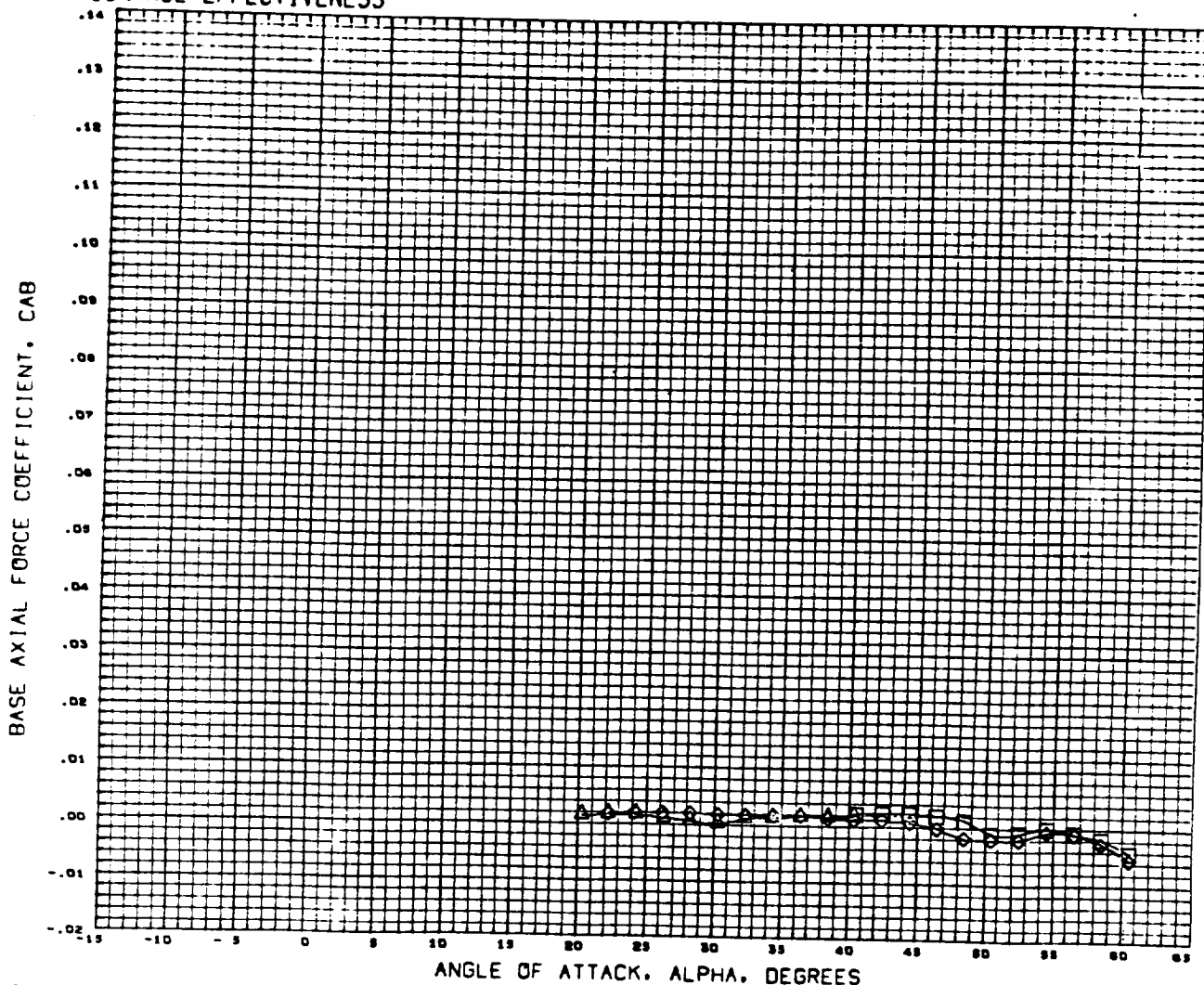
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3011A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3012H) H496-HSFC AR11981-3 MODEL W882V2
 (F3009H) H496-HSFC AR11981-3 MODEL W882V2
 (E3012K) H496-HSFC AR11981-3 MODEL W882V2
 (E3009A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3007X) H496-HSFC AR11981-3 MODEL W882V2

MACH 3.400

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION
 SREP 4.6225 IN.
 LREP 1.5500 IN.
 SREP 4.5500 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

CONTROL EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3811A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3810H) M496-HSFC AR11981-3 MODEL W822V2
 (F3809X) M496-HSFC AR11981-3 MODEL W822V2
 (E3812K) M496-HSFC AR11981-3 MODEL W822V2
 (E3809A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

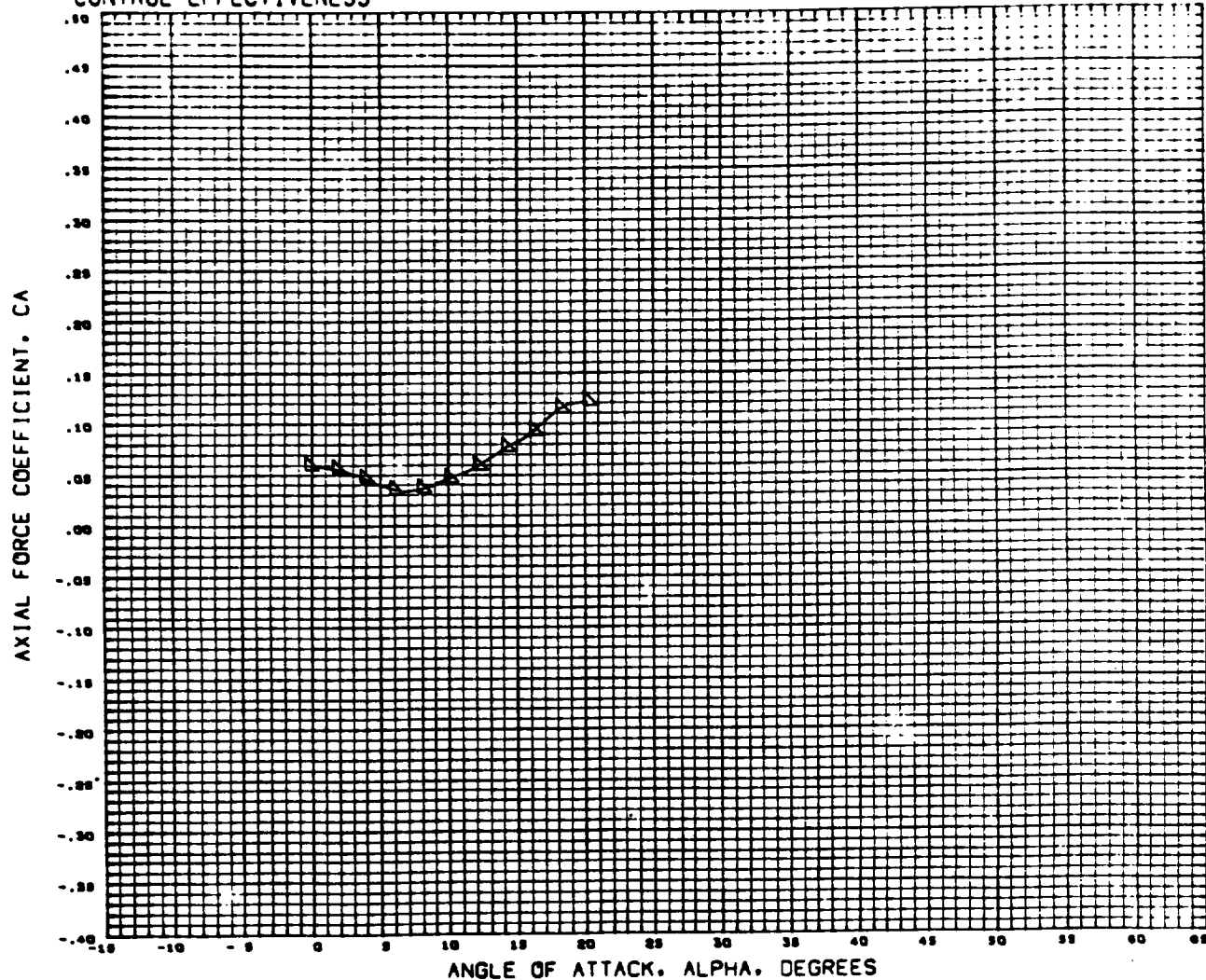
MACH 4.959

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

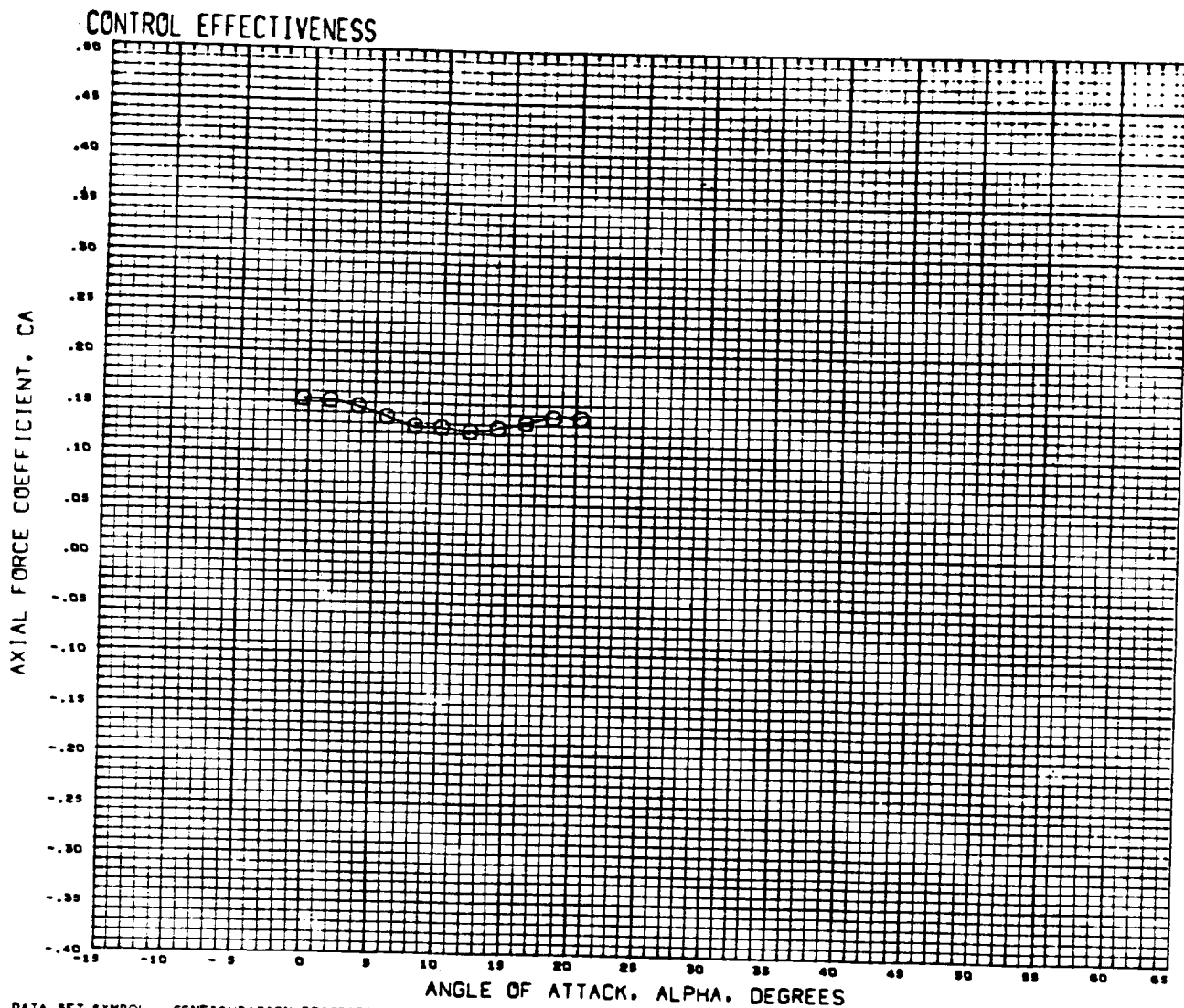
REFERENCE INFORMATION

SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
ZMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.6225 30. IN.
(E3010H)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LREP 1.5360 IN.
(F3009K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	SREP 4.3000 IN.
(E3012K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	XMRP 2.4000 IN.
(E3008A)	H496-HSPC ARI1961-3 MODEL W882V2	0.000	5.000	5.000	YMRP 0.0000 IN.
(F3007E)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025
	MACH 0.997				



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3R11A) M496-M5FC AR11981-3 NODEL W82RV2

(E3R10H) DATA NOT AVAILABLE FOR ALL CONDITIONS

(F3R09X) DATA NOT AVAILABLE FOR ALL CONDITIONS

(E3R12K) DATA NOT AVAILABLE FOR ALL CONDITIONS

(E3R08A) DATA NOT AVAILABLE FOR ALL CONDITIONS

(F3R07X) DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 0.698

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	15.000	15.000
0.000	30.000	30.000

REFERENCE INFORMATION

SREF 4.6225 80 IN.

LREF 1.3360 IN.

BREF 4.3000 IN.

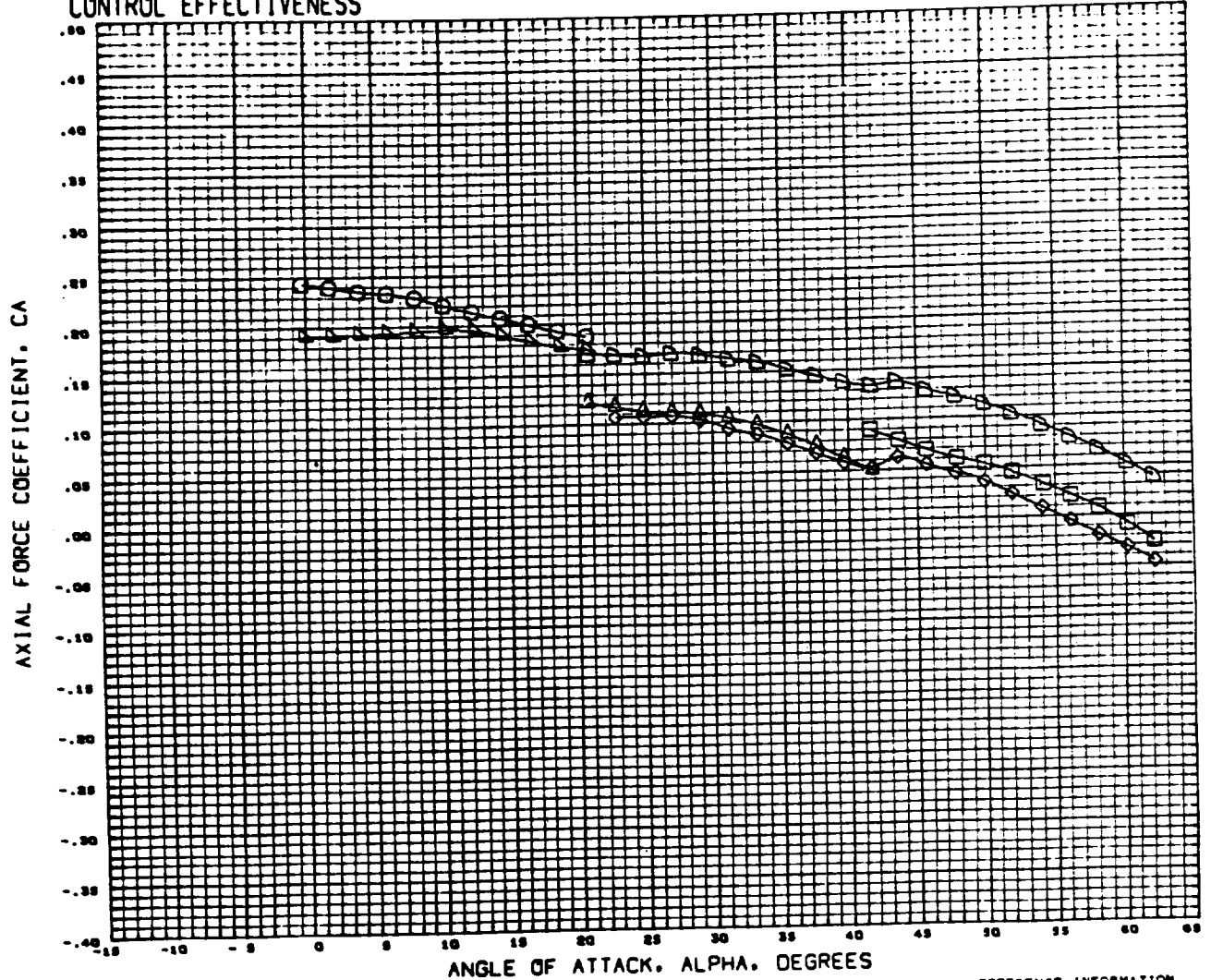
ZMRP 2.4000 IN.

YMRP 0.0000 IN.

ZMRP 0.0000 IN.

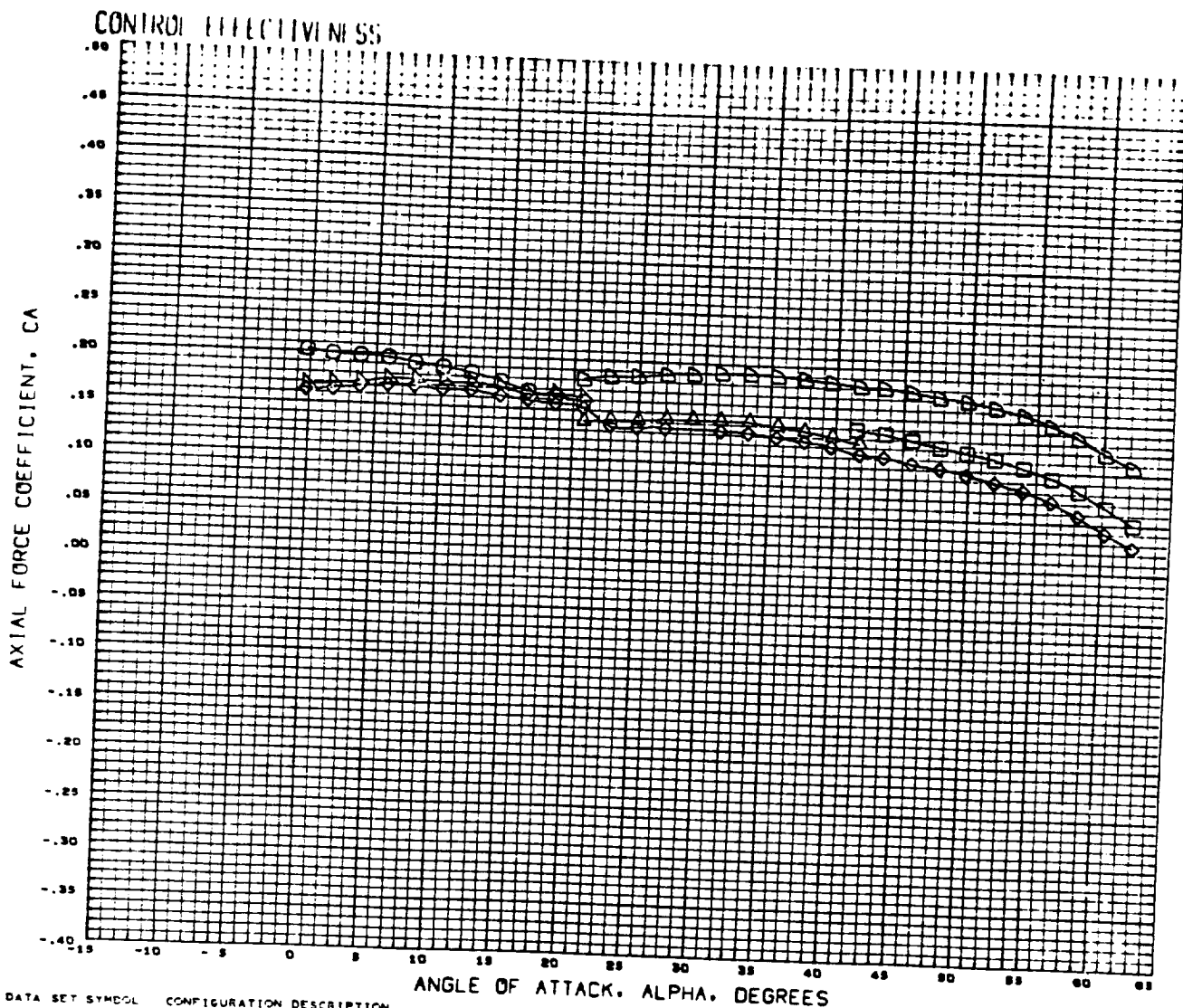
SCALE 0.0025

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3811A)	N496-N3FC AR11961-3 MODEL W882V2	0.000	-30.000	0.000	SREF 4.6225 SQ. IN.
(E3810M)	N496-N3FC AR11961-3 MODEL W882V2	0.000	-15.000	-15.000	LREF 1.5365 IN.
(P3809X)	N496-N3FC AR11961-3 MODEL W882V2	0.000	0.000	0.000	SREF 4.3000 IN.
(E3818K)	N496-N3FC AR11961-3 MODEL W882V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3808A)	N496-N3FC AR11961-3 MODEL W882V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(P3807X)	N496-N3FC AR11961-3 MODEL W882V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

RACH 1.199

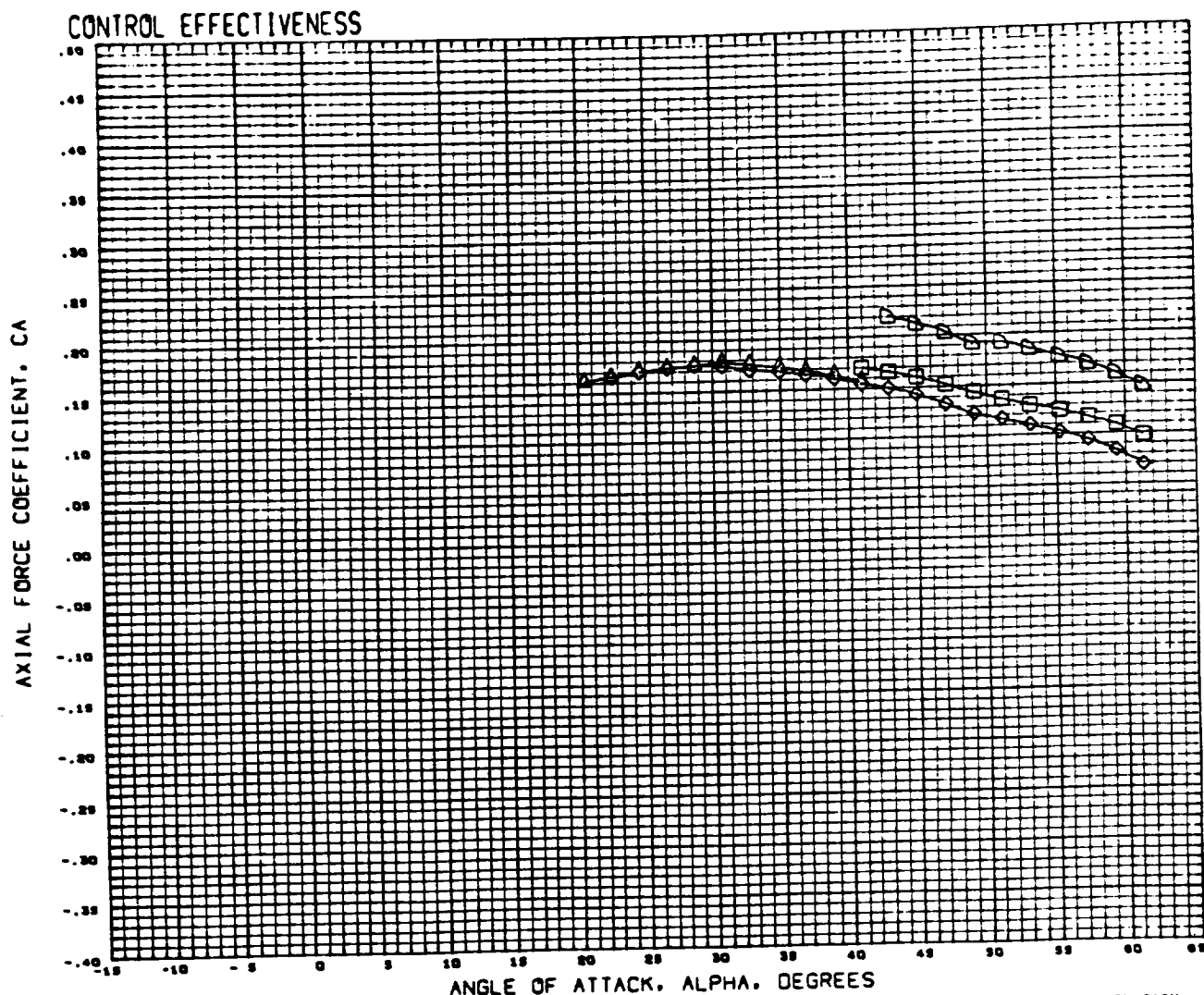


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3811A)	M496-HSFC AR11991-3 MODEL W682V2
(E3810H)	M496-HSFC AR11991-3 MODEL W682V2
(F3409X)	M496-HSFC AR11991-3 MODEL W682V2
(E3812A)	M496-HSFC AR11991-3 MODEL W682V2
(E3808A)	M496-HSFC AR11991-3 MODEL W682V2
(F3407X)	M496-HSFC AR11991-3 MODEL W682V2

MACH 1.952

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION	
SRFP	4.6225 50. IN.
LRFP	1.3360 IN.
SRFP	4.3000 IN.
YMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025



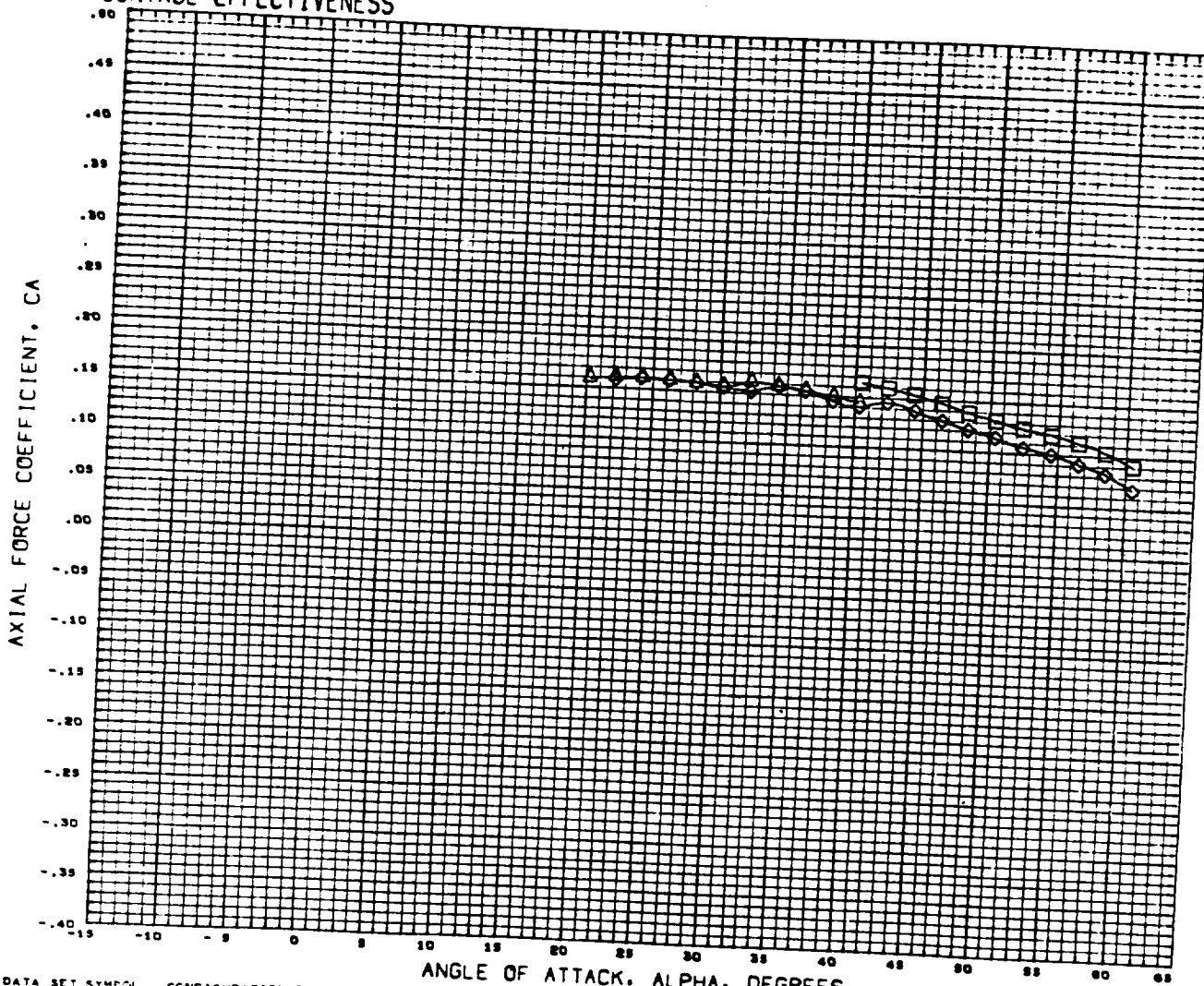
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3811A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3810M)	N496-NSFC ARI1981-3 MODEL W882VE
(P3909E)	N496-NSFC ARI1981-3 MODEL W882VE
(E3912K)	N496-NSFC ARI1981-3 MODEL W882VE
(E3908A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(P3907E)	N496-NSFC ARI1981-3 MODEL W882VE

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH 3.400

CONTROL EFFECTIVENESS



DATA SET SYMBOL
(E3811A)
(E3810H)
(F38092)
(E38127)
(E3805A)
(F3807K)

DATA NOT AVAILABLE FOR ALL CONDITIONS

CONFIGURATION DESCRIPTION

DATA NOT AVAILABLE FOR ALL CONDITIONS
M496-HSFC AR11981-3 MODEL W822V2
M496-HSFC AR11981-3 MODEL W822V2
M496-HSFC AR11981-3 MODEL W822V2
DATA NOT AVAILABLE FOR ALL CONDITIONS
DATA NOT AVAILABLE FOR ALL CONDITIONS

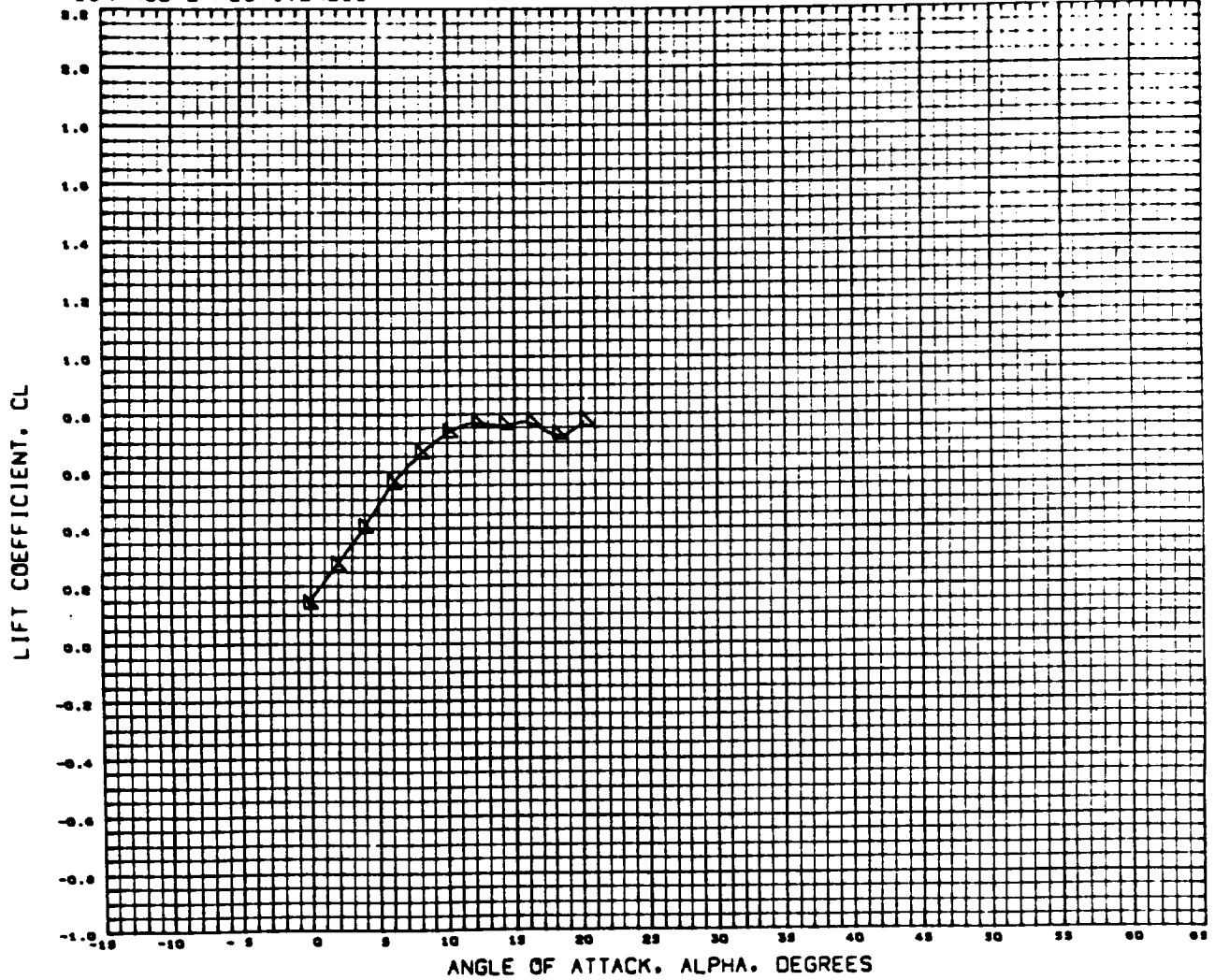
MACH 4.959

ANGLE OF ATTACK, ALPHA, DEGREES

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

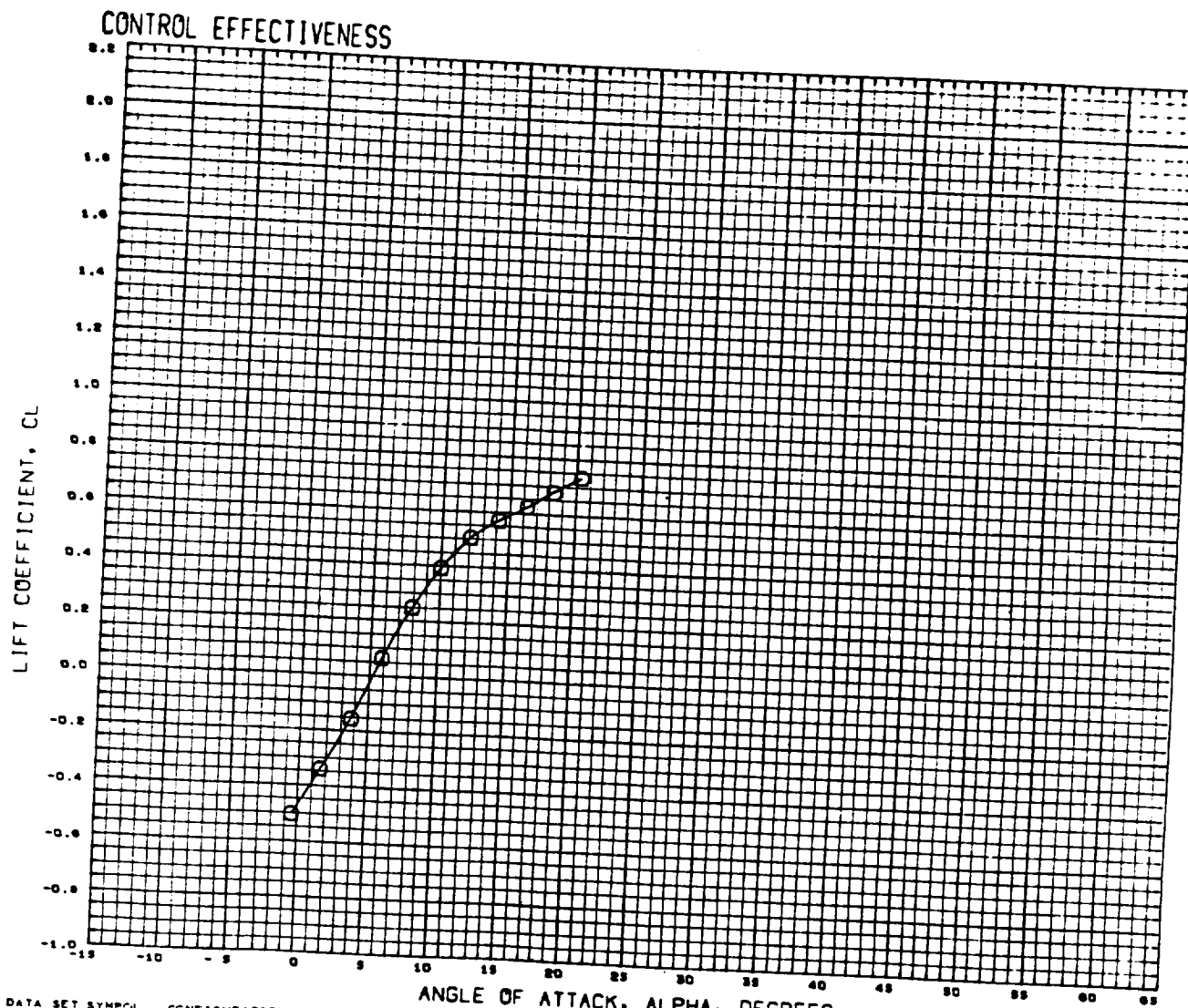
REFERENCE INFORMATION
SREF 4.6225 SQ. IN.
LREF 1.5360 IN.
SREF 4.3000 IN.
XMRP 8.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3611A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.4225 33.1N.
(E3610M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LREP 1.5360 1N.
(P3609K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	SREP 4.3000 1N.
(E3612K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	5.000	5.000	XMRP 2.4000 1N.
(E3613A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YMRP 0.0000 1N.
(P3607E)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP 0.0000 1N.
					SCALE 0.0025

MACH 0.997

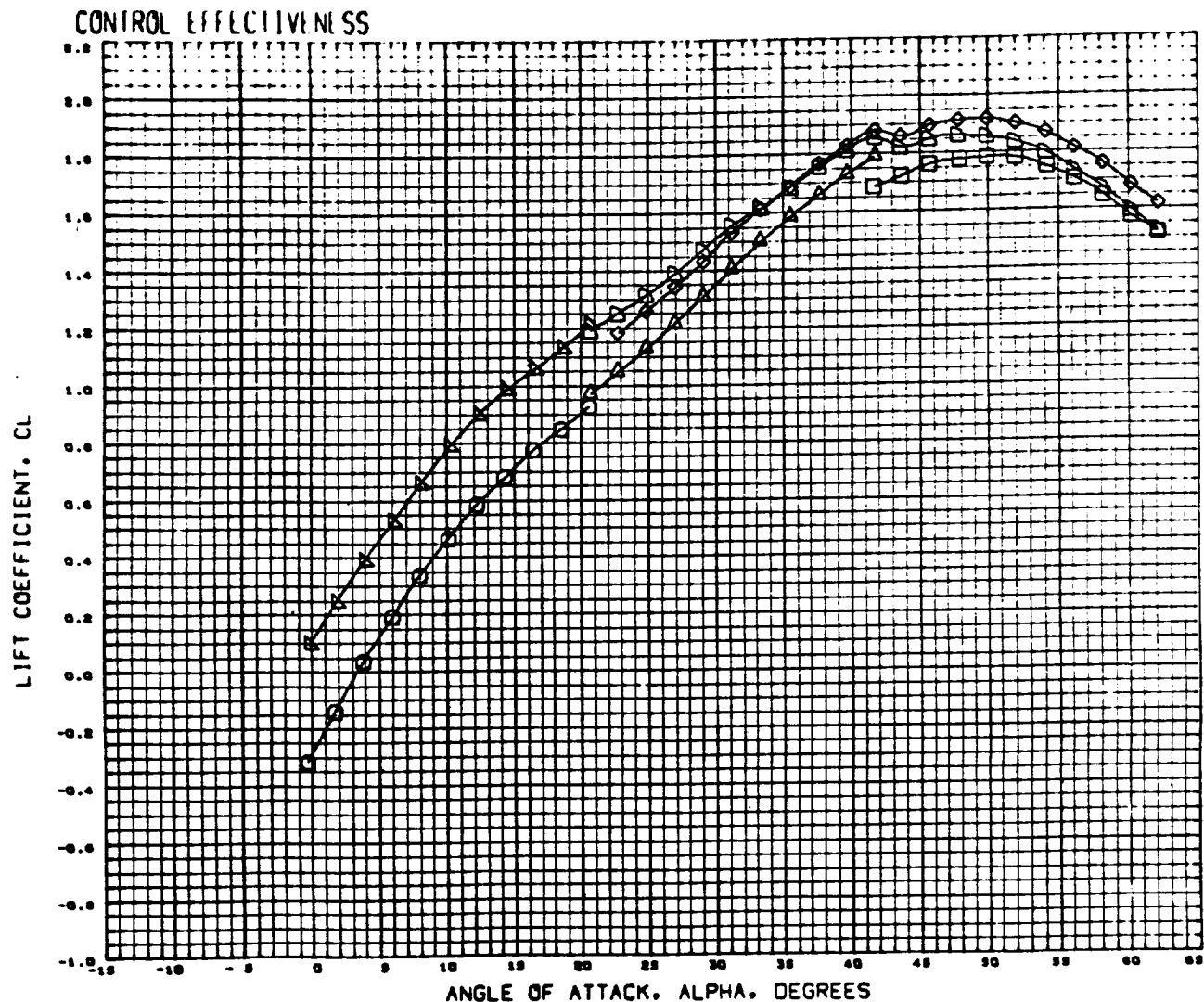


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E38114) M496-HSFC AR11981-3 MODEL W882V2
 (E3810H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809Z) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3812K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E380AA) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 MACH 0.898

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

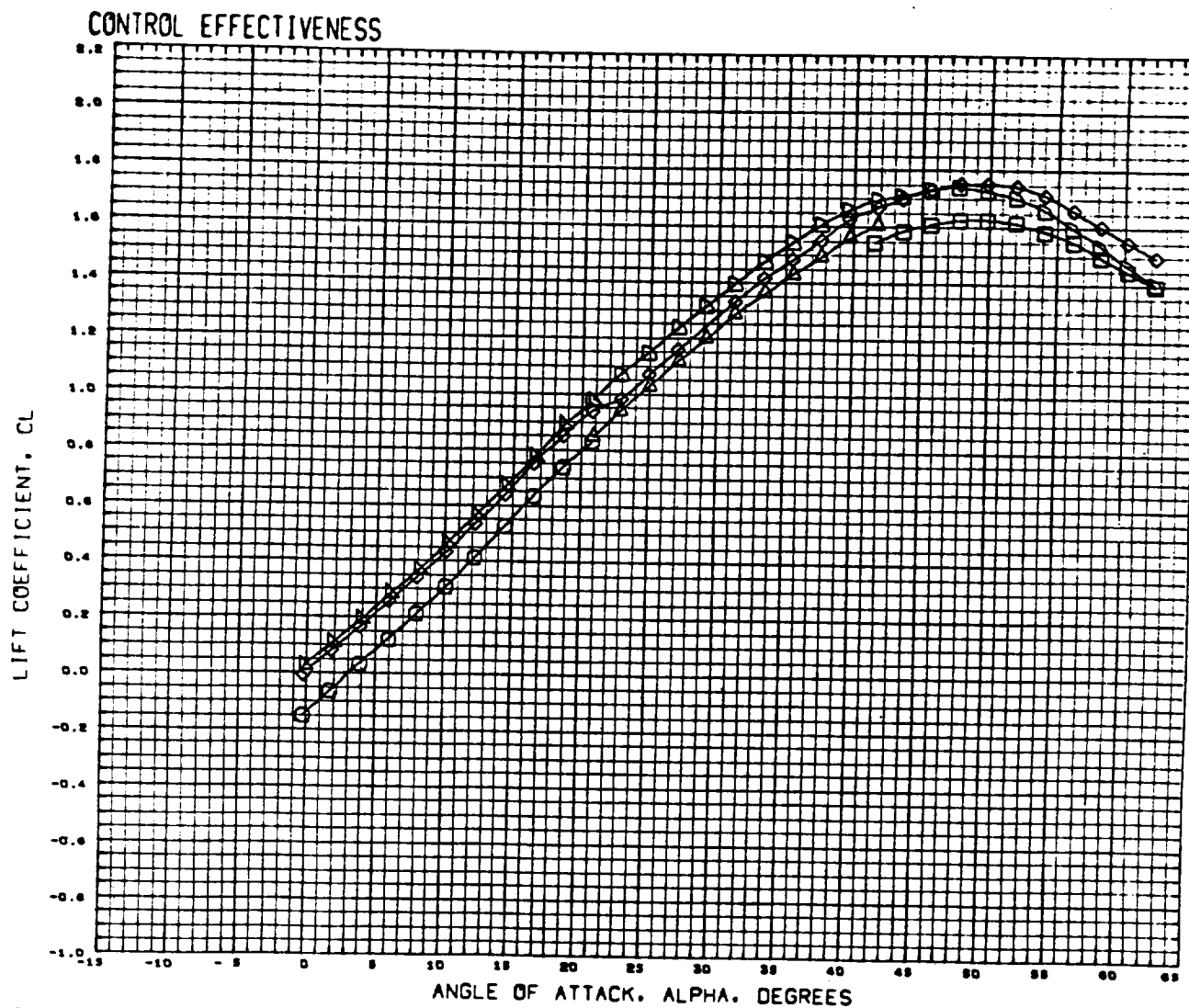
REFERENCE INFORMATION

SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3811A)	N496-HSFC AR11981-3 MODEL W882V2	0.000	-30.000	0.000	SREF 4.8225 IN.
(E3810M)	N496-HSFC AR11981-3 MODEL W882V2	0.000	-15.000	-15.000	LREF 1.5340 IN.
(P3809X)	N496-HSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3812K)	N496-HSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3808A)	N496-HSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(P3807Z)	N496-HSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

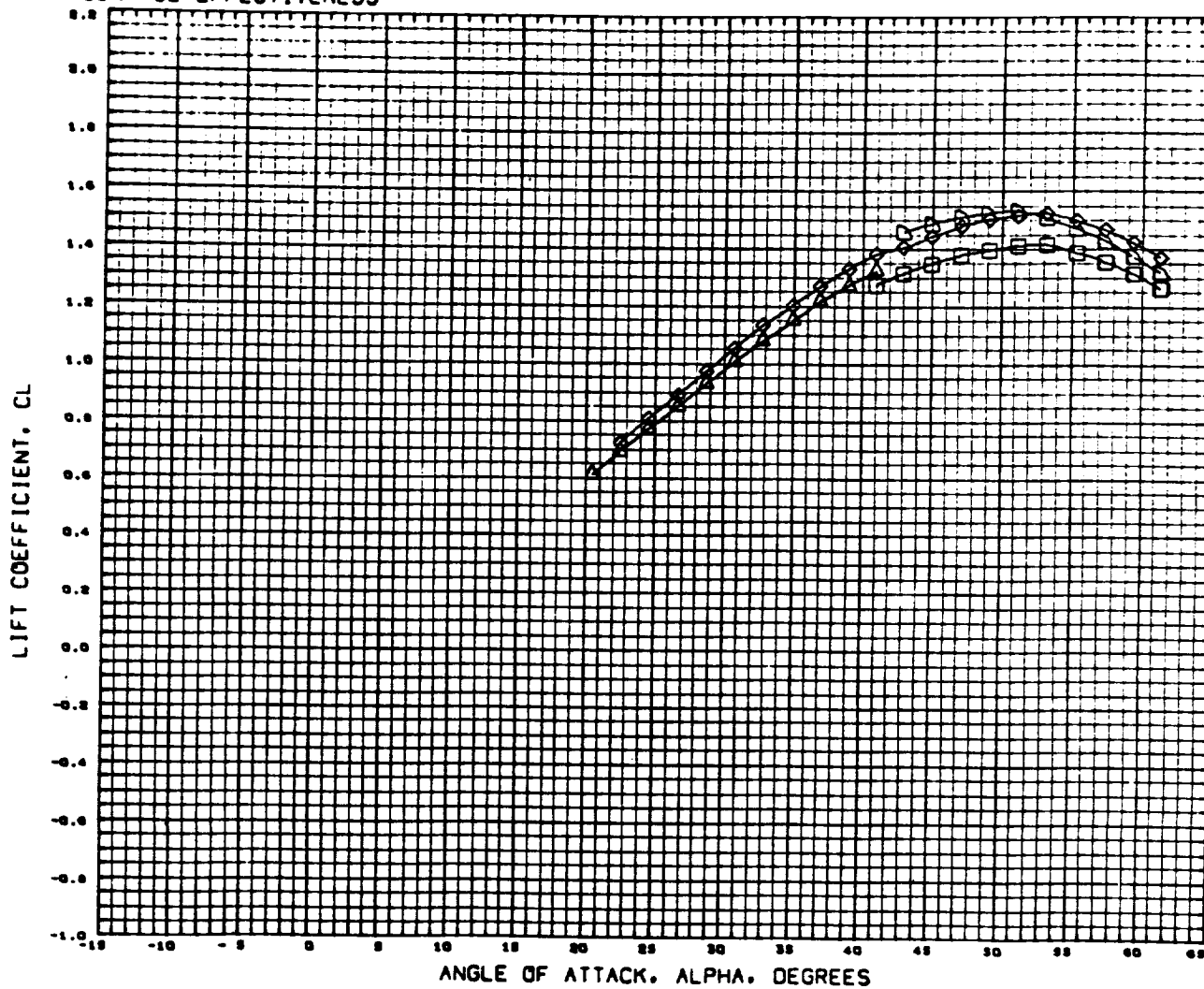
NACH 1.199



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3611A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	-30.000	0.000	SREF 4.6225 SQ. IN.
(E3610H)	M496-MSFC AR11981-3 MODEL W822V2	0.000	-15.000	-15.000	LREF 1.9360 IN.
(F3609X)	M496-MSFC AR11981-3 MODEL W822V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3612K)	M496-MSFC AR11981-3 MODEL W822V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3609A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3607X)	M496-MSFC AR11981-3 MODEL W822V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.952

CONTROL EFFECTIVENESS

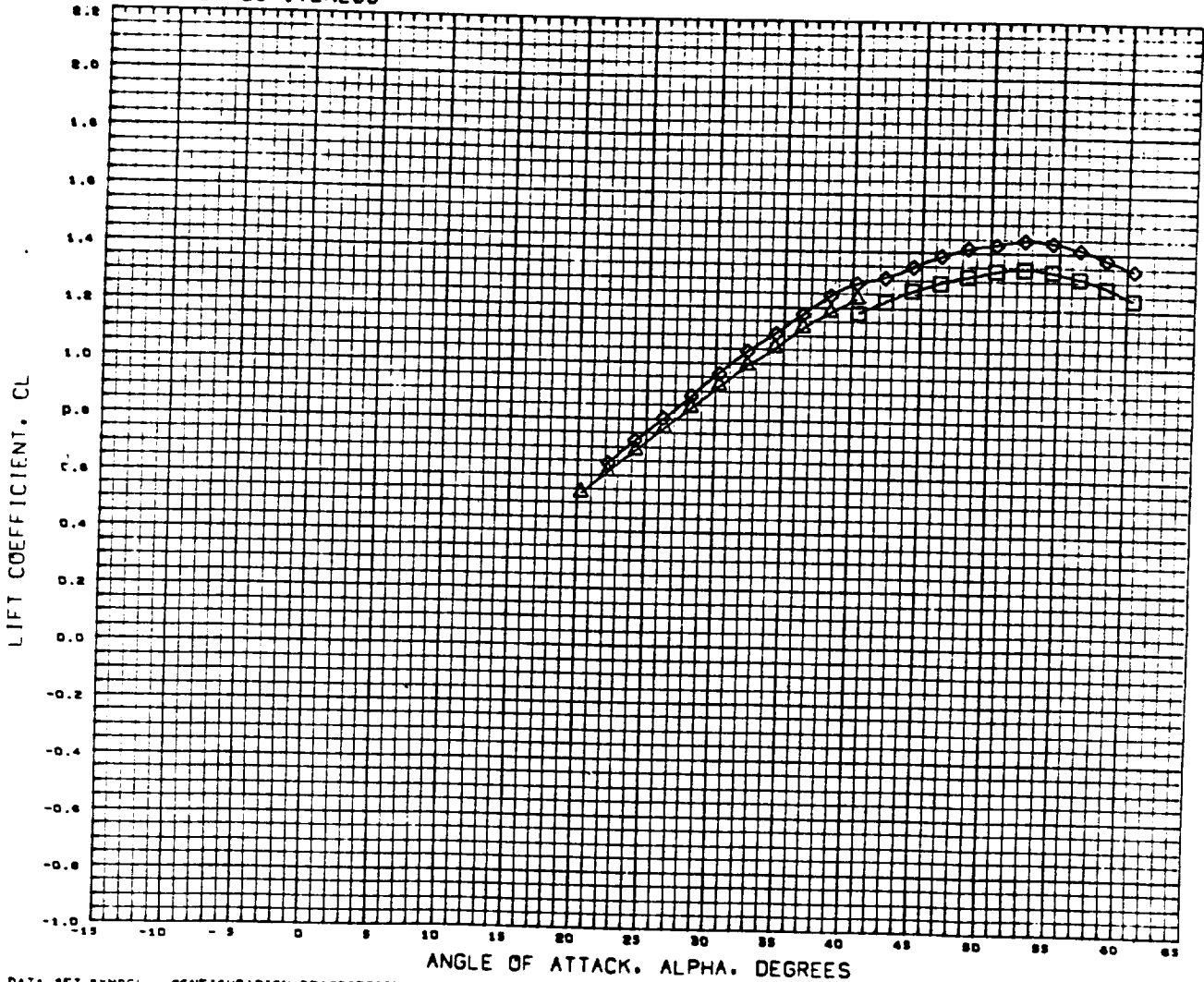


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3011A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3010M) M496-M3PC AR11981-3 MODEL W882V2
 (P3009X) M496-M3PC AR11981-3 MODEL W882V2
 (E3012A) M496-M3PC AR11981-3 MODEL W882V2
 (E3008A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3007X) M496-M3PC AR11981-3 MODEL W882V2
 MACH 3.480

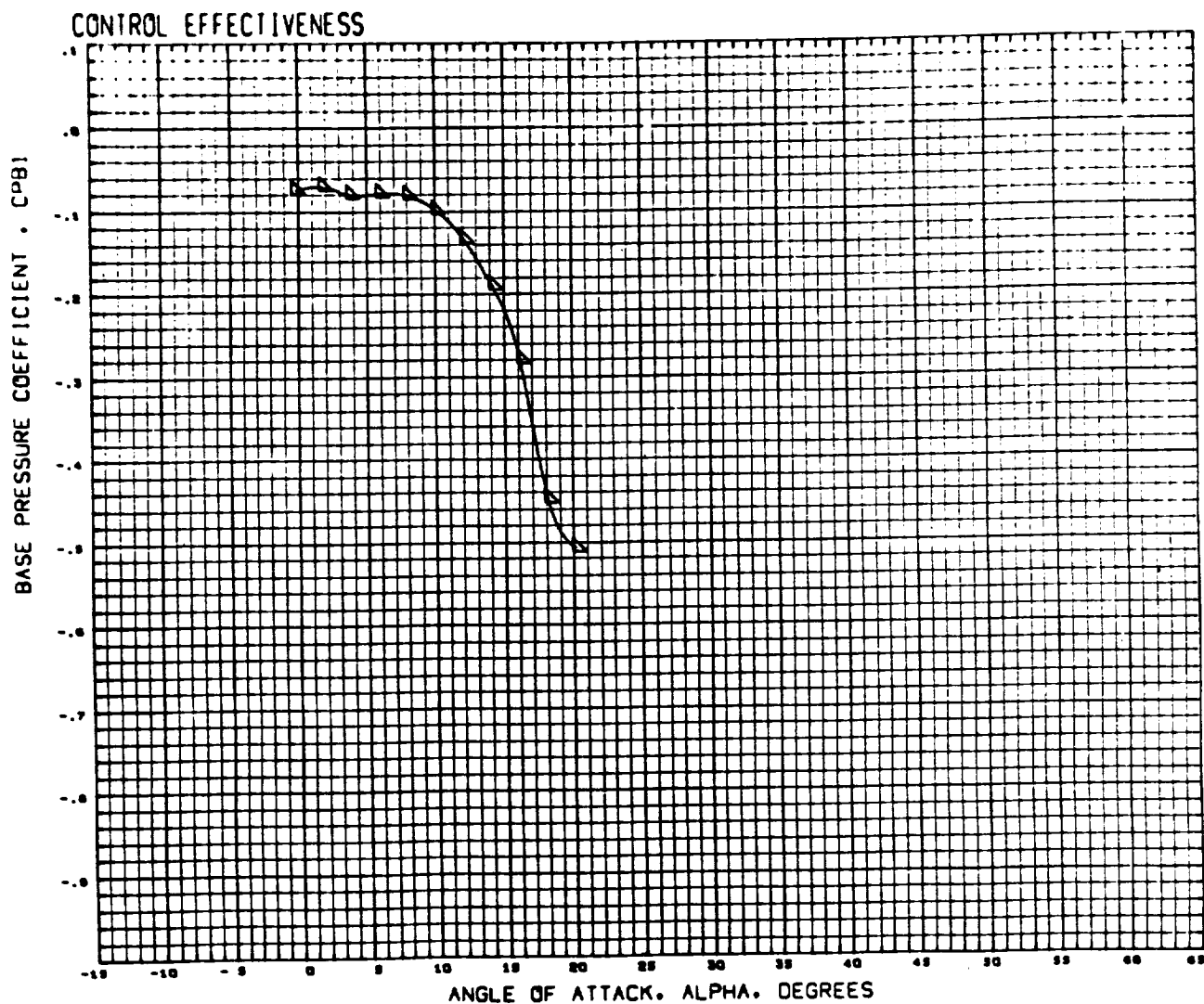
BETA ELEVTR AILRON
 0.000 -30.000 0.000
 0.000 -15.000 -15.000
 0.000 0.000 0.000
 0.000 5.000 5.000
 0.000 15.000 15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

CONTROL EFFECTIVENESS



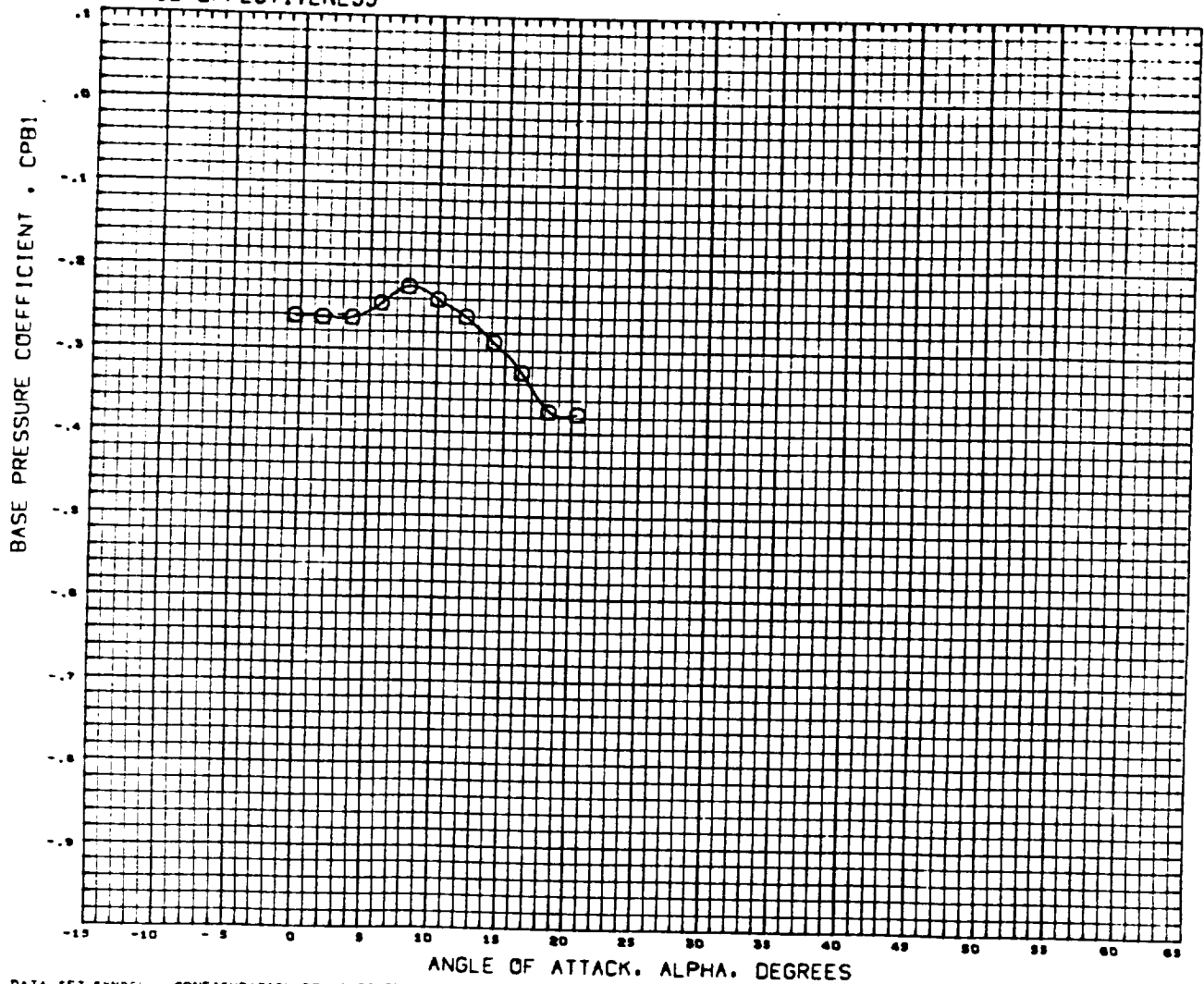
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3A11A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREF 4.6225 sq.in.
(E3A10H)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	-19.000	-19.000	LREF 1.3360 in.
(F3A09X)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	0.000	0.000	BREF 4.3000 in.
(E3A12K)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	9.000	9.000	YNRP 2.4000 in.
(E3A08A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	19.000	19.000	YNRP 0.0000 in.
(F3A07X)	DATA NOT AVAILABLE FOR ALL CONDITIONS				ZMRP 0.0000 in.
					SCALE 0.0025
MACH	4.959				



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION	
(E3811A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREF	4.6225 SQ. IN.
(E3810H)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LREF	1.5360 IN.
(F3809X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BREF	4.3000 IN.
(E3812K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000			XMRP	2.4000 IN.
(E3809A)	M496-MSFC AR11961-3 MODEL W882V2	0.000	5.000	5.000	YMRP	0.0000 IN.
(F3807X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP	0.0000 IN.
					SCALE	0.0025

MACH 0.397

CONTROL EFFECTIVENESS

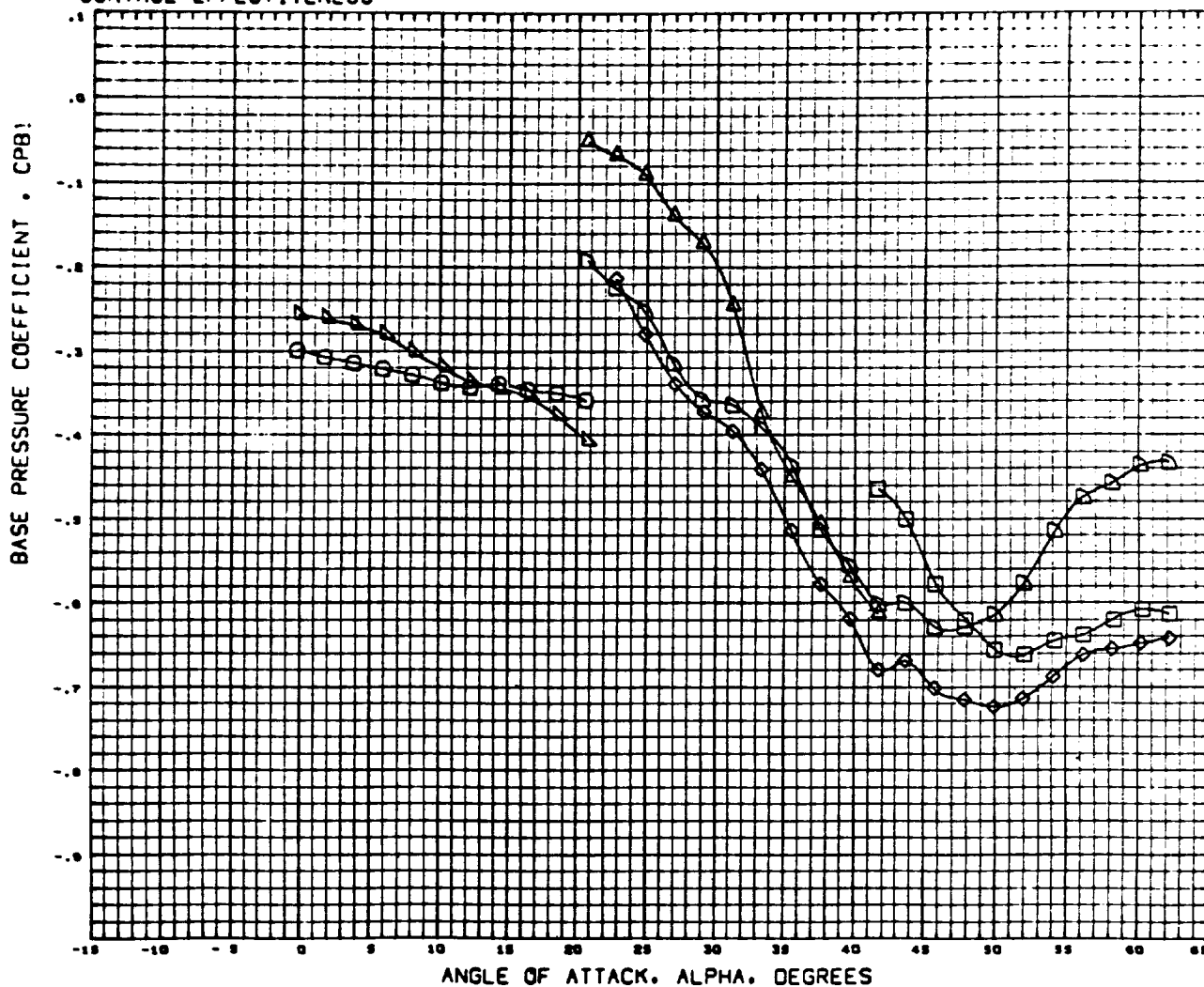


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3811A) M496-MSFC AR11981-3 MODEL W822V2
 (E3810H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3812F) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3809A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 MACH 0.898

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.9360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

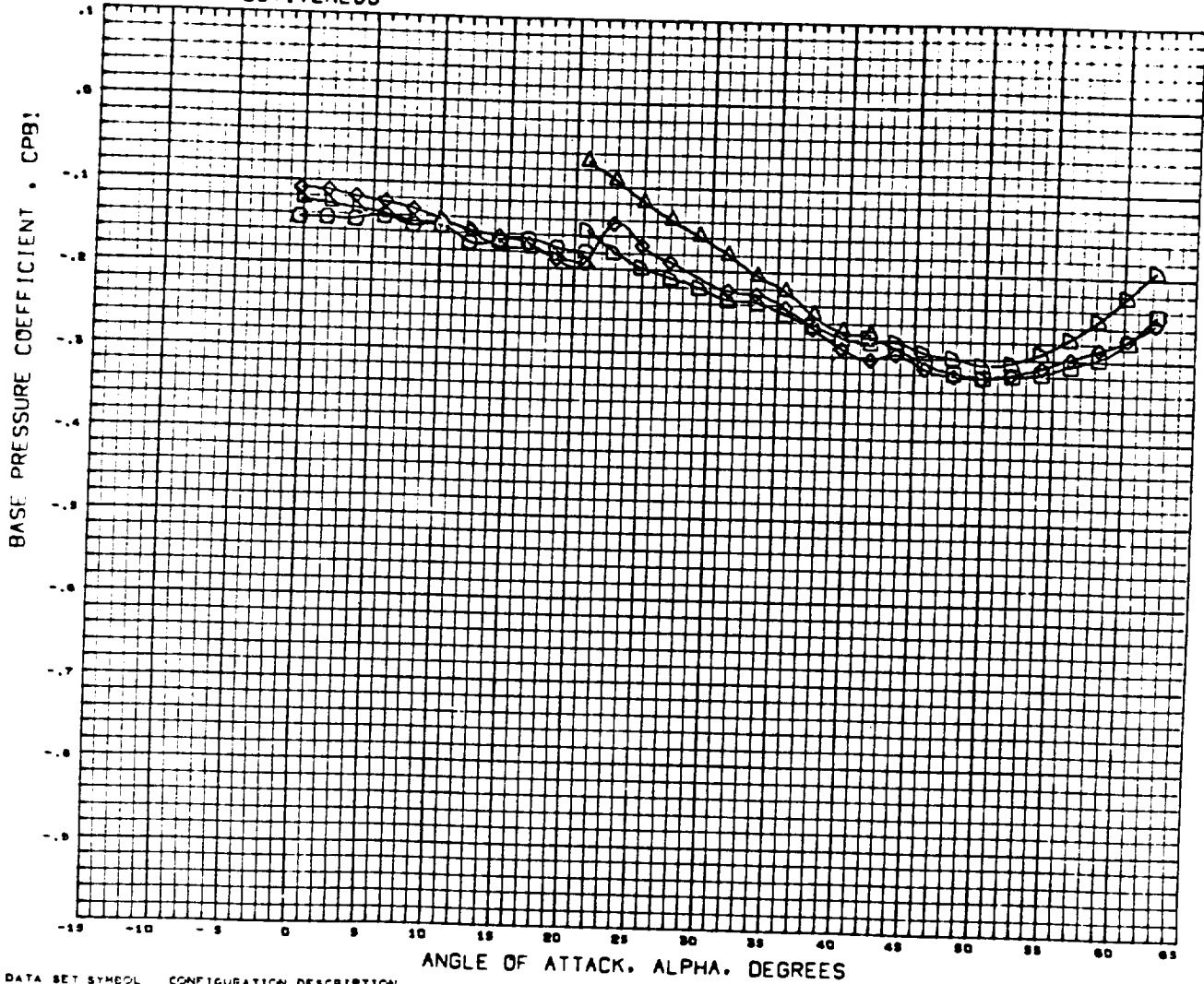
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	M496-HSFC AR11901-3 MODEL W882V2	0.000	-30.000	0.000	SREP 4.6225 53. IN.
(E3010M)	M496-HSFC AR11901-3 MODEL W882V2	0.000	-15.000	-15.000	LREP 1.5360 IN.
(P3009K)	M496-HSFC AR11901-3 MODEL W882V2	0.000	0.000	0.000	SREP 4.3000 IN.
(E3012K)	M496-HSFC AR11901-3 MODEL W882V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3009A)	M496-HSFC AR11901-3 MODEL W882V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(P3007E)	M496-HSFC AR11901-3 MODEL W882V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.199

CONTROL EFFECTIVENESS

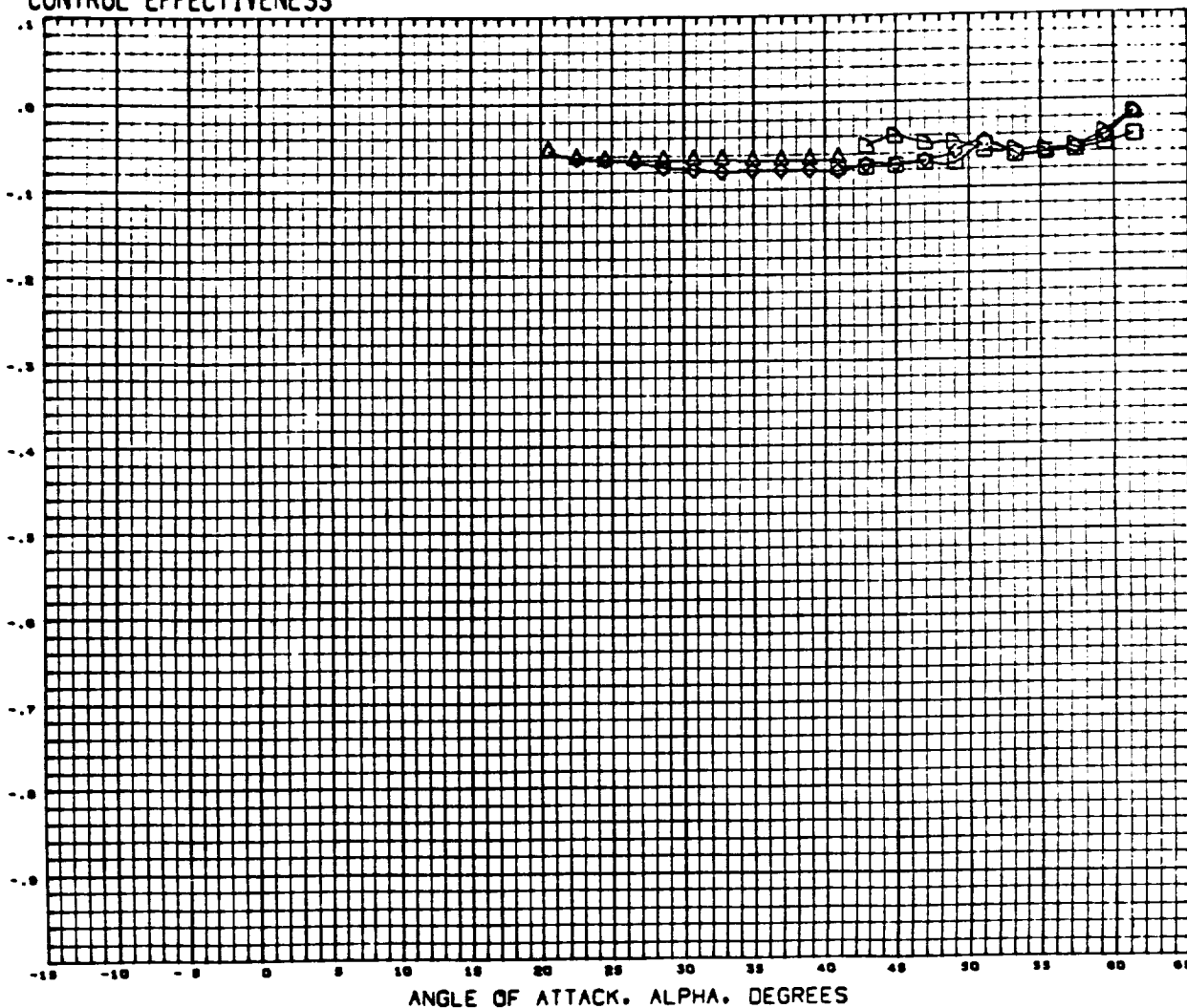


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	-30.000	0.000	BREF 4.8225 SQ. IN.
(E3810A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	-15.000	-15.000	LREF 1.9380 IN.
(F3909A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3912A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3929A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3407A)	M496-MSFC AR11981-3 MODEL W822V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.932

CONTROL EFFECTIVENESS

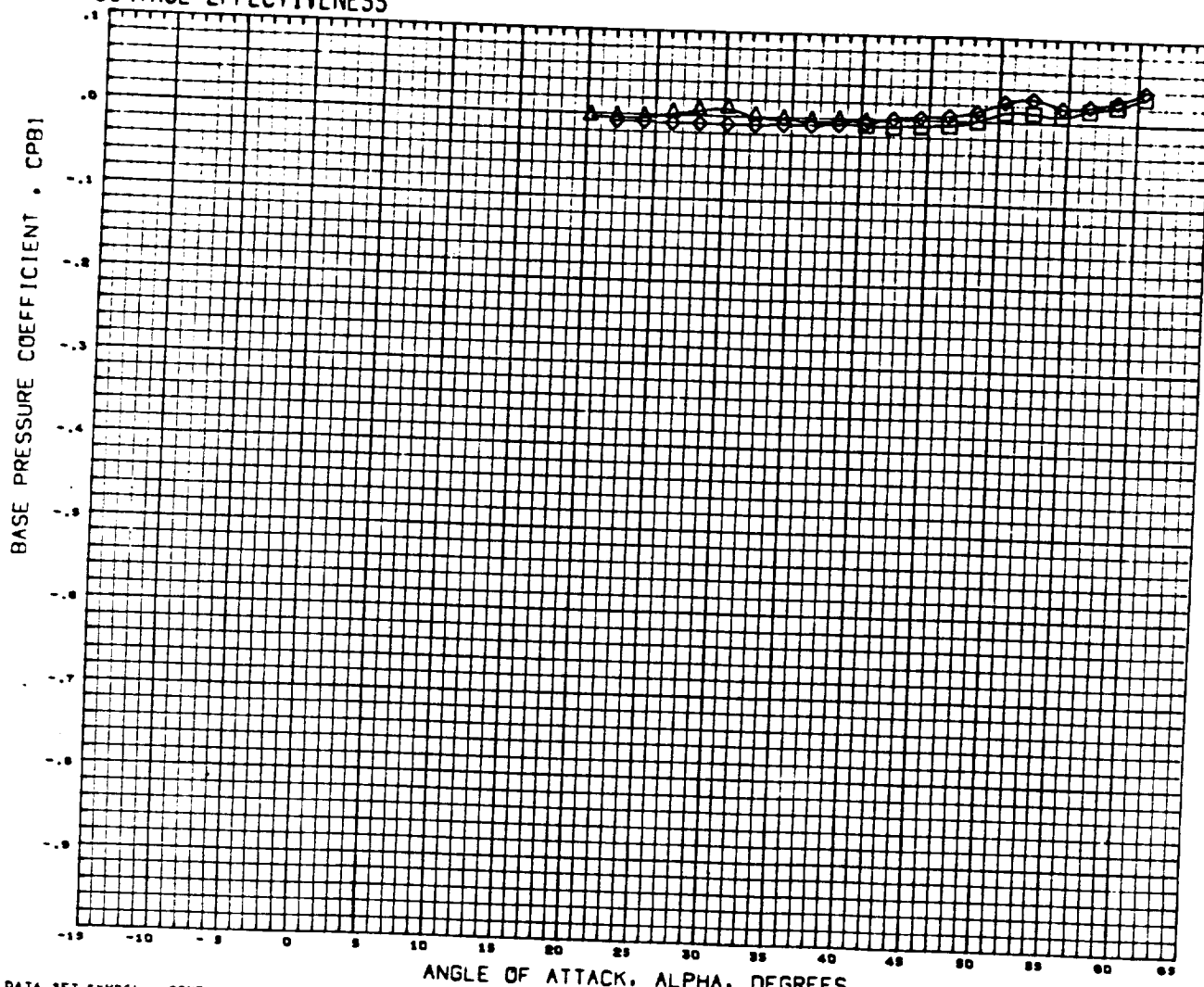
BASE PRESSURE COEFFICIENT - CPB1



DATA SET SYMBOL		CONFIGURATION DESCRIPTION		BETA	ELEVTR	AILRON	REFERENCE INFORMATION	
(E3011A)		DATA NOT AVAILABLE FOR ALL CONDITIONS		0.000	-30.000	0.000	SREP	4.6225 53. IN.
(E3010M)		H496-MSFC	AR11981-3 MODEL W882V8	0.000	-15.000	-15.000	LRFP	1.5360 IN.
(F3009X)		H496-MSFC	AR11981-3 MODEL W882V8	0.000	0.000	0.000	SRFP	4.3000 IN.
(E3012K)		H496-MSFC	AR11981-3 MODEL W882V8	0.000			ZMRP	2.4000 IN.
(E3020A)		DATA NOT AVAILABLE FOR ALL CONDITIONS		0.000	5.000	5.000	YMRP	0.0000 IN.
(F3007X)		H496-MSFC	AR11981-3 MODEL W882V8	0.000	15.000	15.000	ZMRP	0.0000 IN.
							SCALE	0.0025

MACH 5.480

CONTROL EFFECTIVENESS

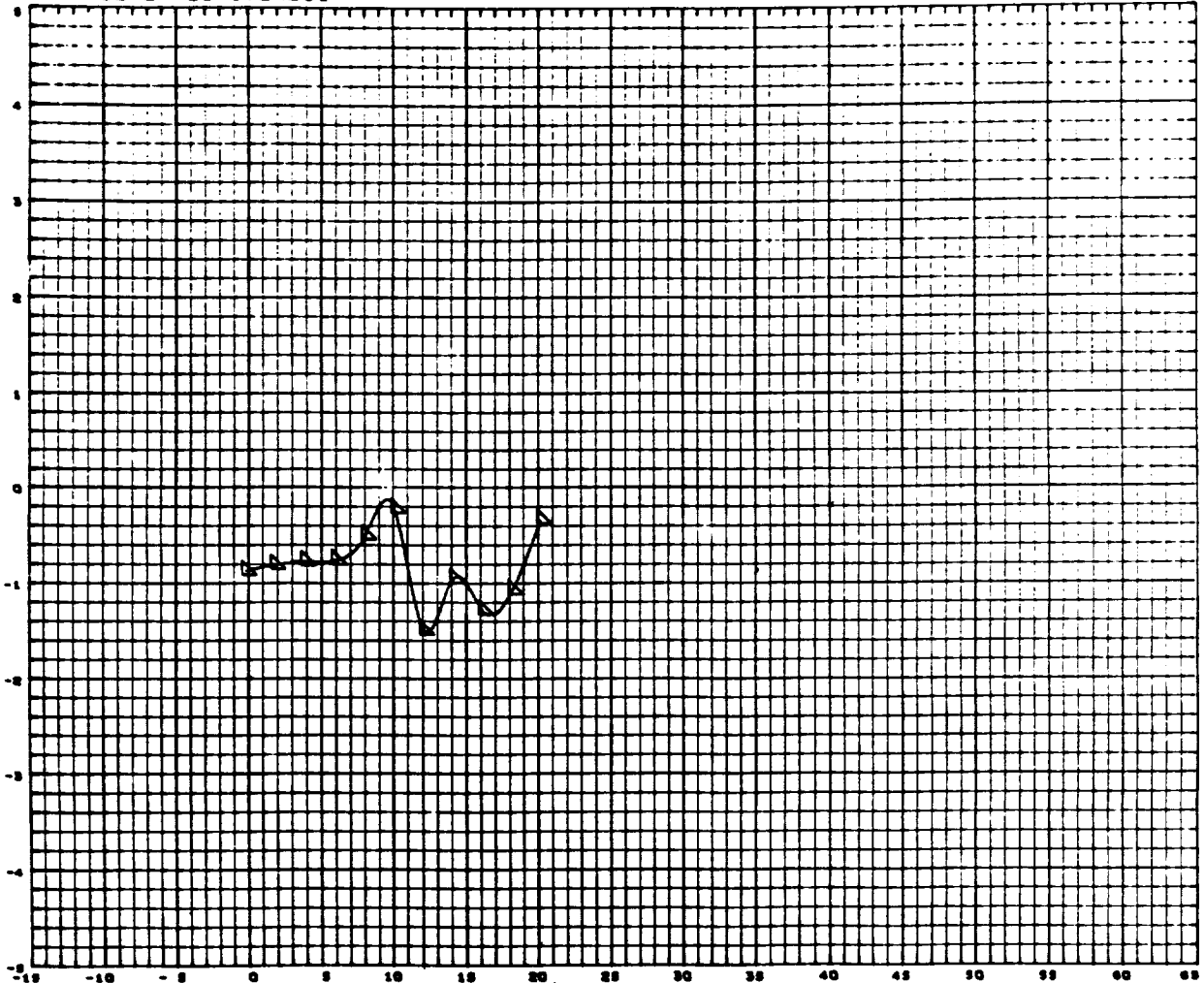


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3911A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREF 4.6225 50. IN.
(E3910H)	M496-MSFC AR11981-3 MODEL W682V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(F3909X)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3912K)	M496-MSFC AR11981-3 MODEL W682V2	0.000	8.000	8.000	ENRP 2.4000 IN.
(E3909A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YNRP 0.0000 IN.
(F3907X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000			ZNRP 0.0000 IN.
					SCALE 0.0025

MACH 4.959

CONTROL EFFECTIVENESS

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3611A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3610H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3609X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3612K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3608A) M496-HSPC AR1191-3 MODEL W882V2
 (F3607X) DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 0.597

BETA ELEVTR AILRON

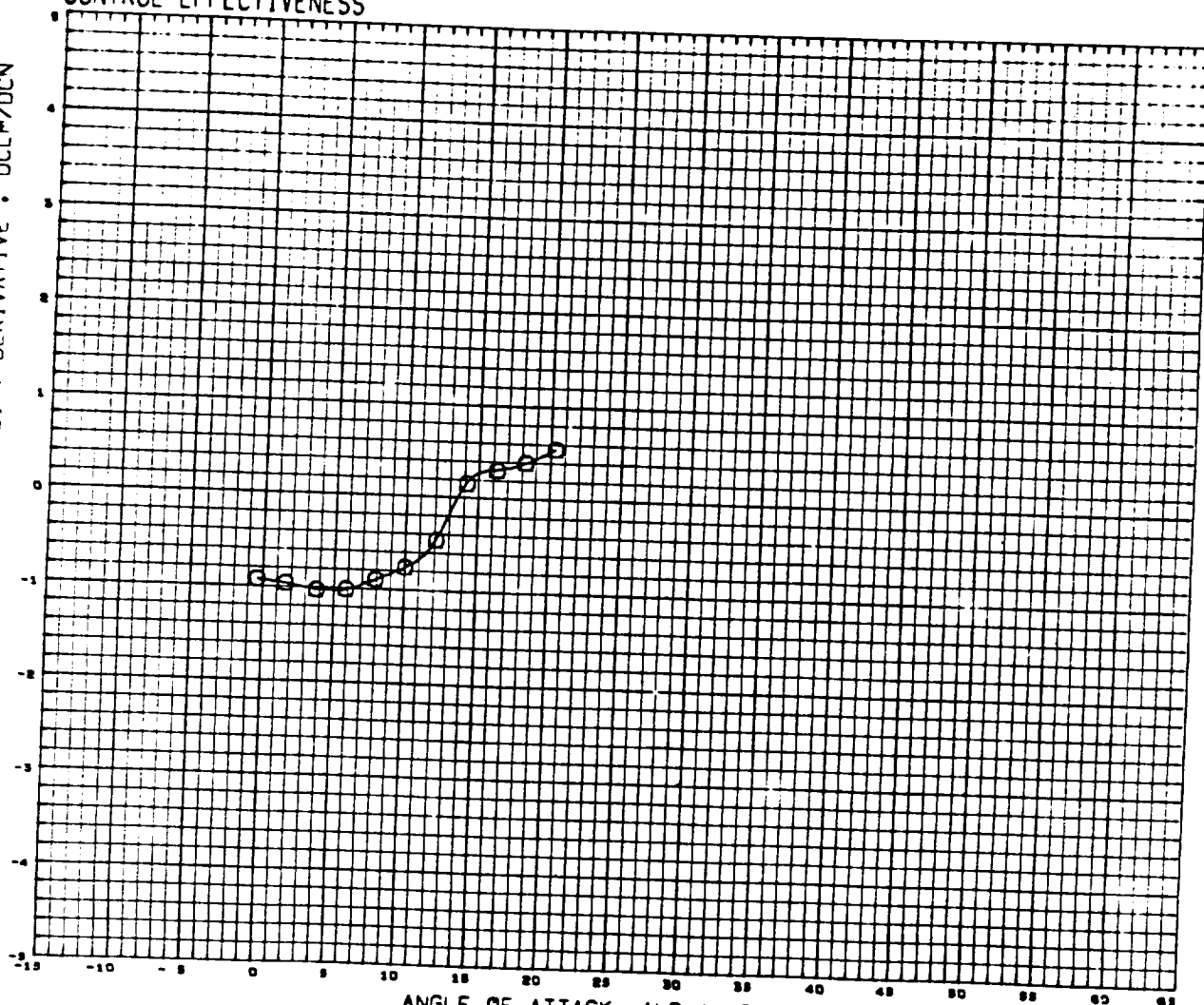
0.000 -30.000 0.000
 0.000 -15.000 -15.000
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 5.000 5.000
 0.000 15.000 15.000

REFERENCE INFORMATION

SREF 4.6223 53.1N.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

CONTROL EFFECTIVENESS

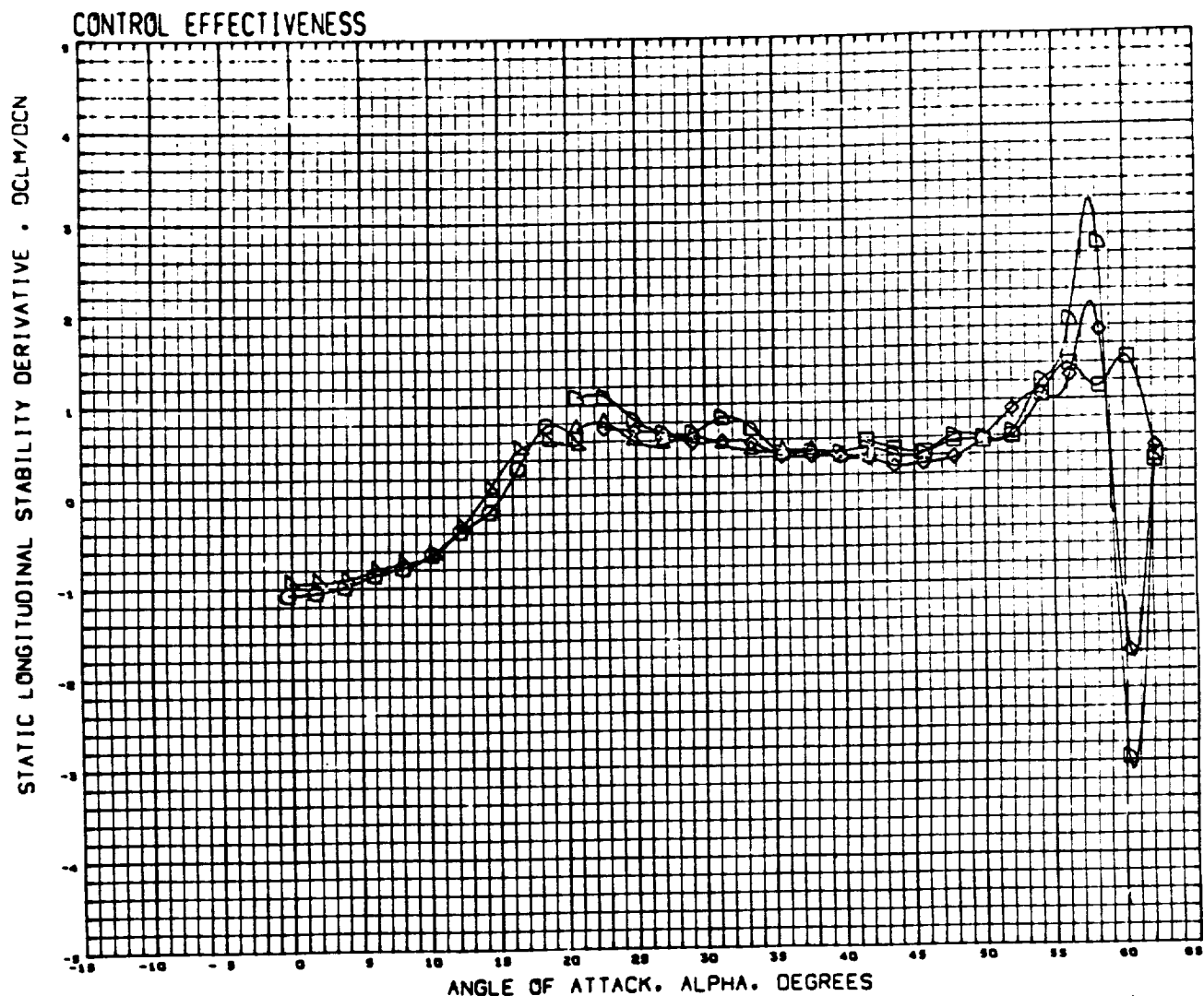
STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3911A) H496-HSPC AR11981-3 MOCEL W82V2
 (E3910H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3909X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3912K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3908A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3907K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 MACH 0.898

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.8360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

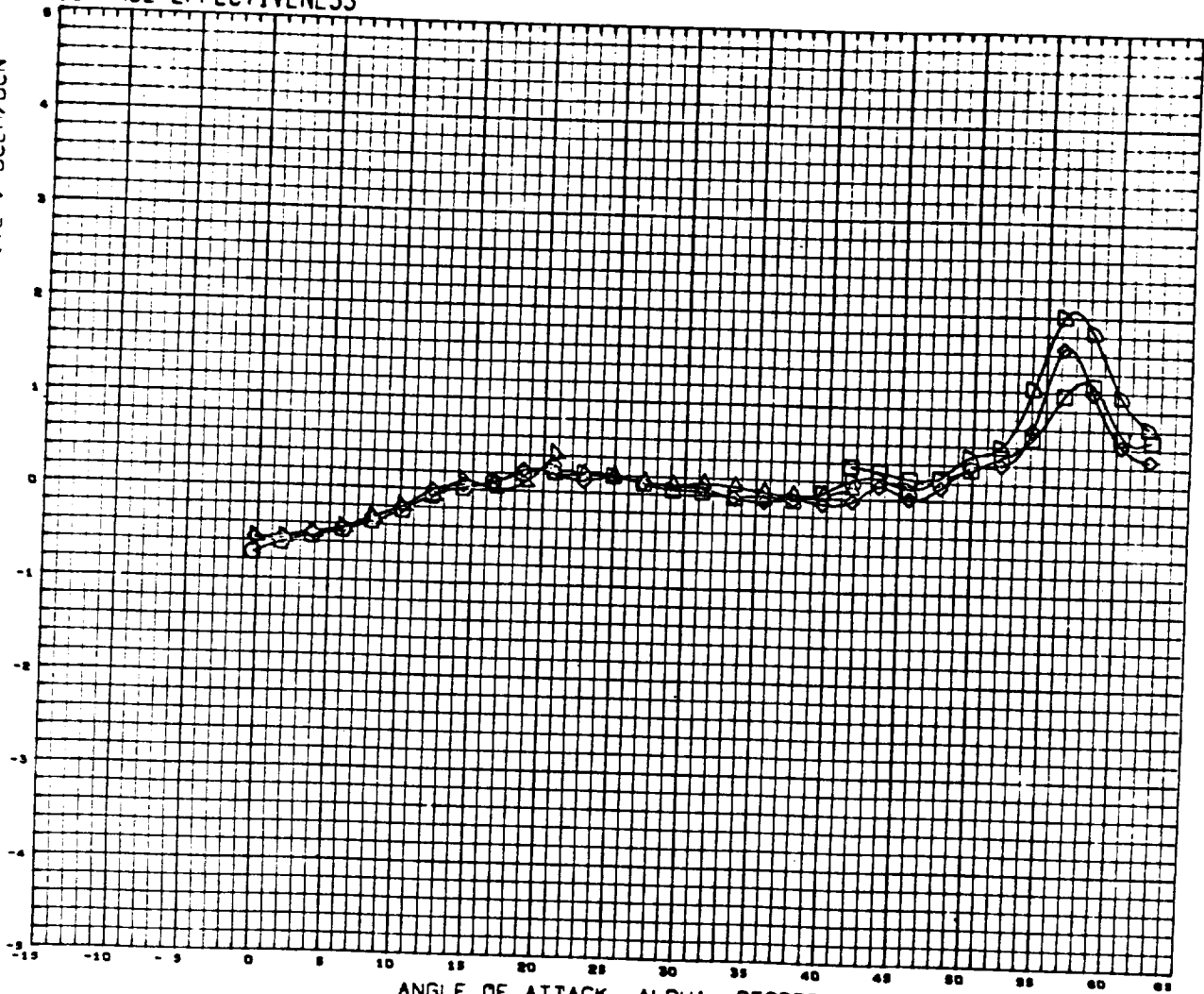



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	H496-NSFC AR11981-3 MODEL W882V2	0.000	-30.000	0.000	SREF 4.6225 SQ. IN.
(E3010N)	H496-NSFC AR11981-3 MODEL W882V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(P3009E)	H496-NSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3012K)	H496-NSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000	XHRP 2.4000 IN.
(E3009A)	H496-NSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000	YHRP 0.0000 IN.
(P3007E)	H496-NSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0025

MACH 1.199

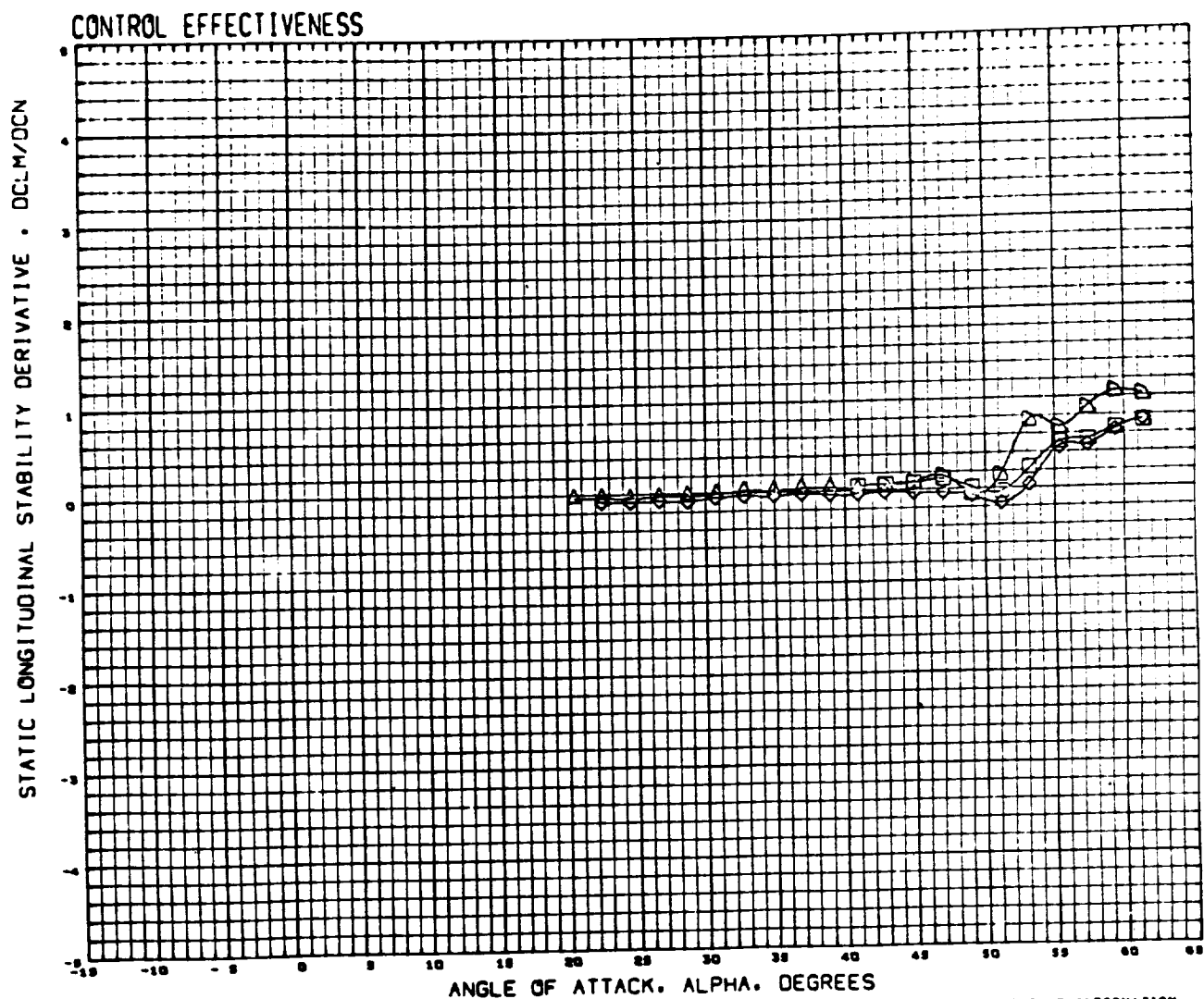
CONTROL EFFECTIVENESS

STATIC LONGITUDINAL STABILITY DERIVATIVE, DCM/DCN



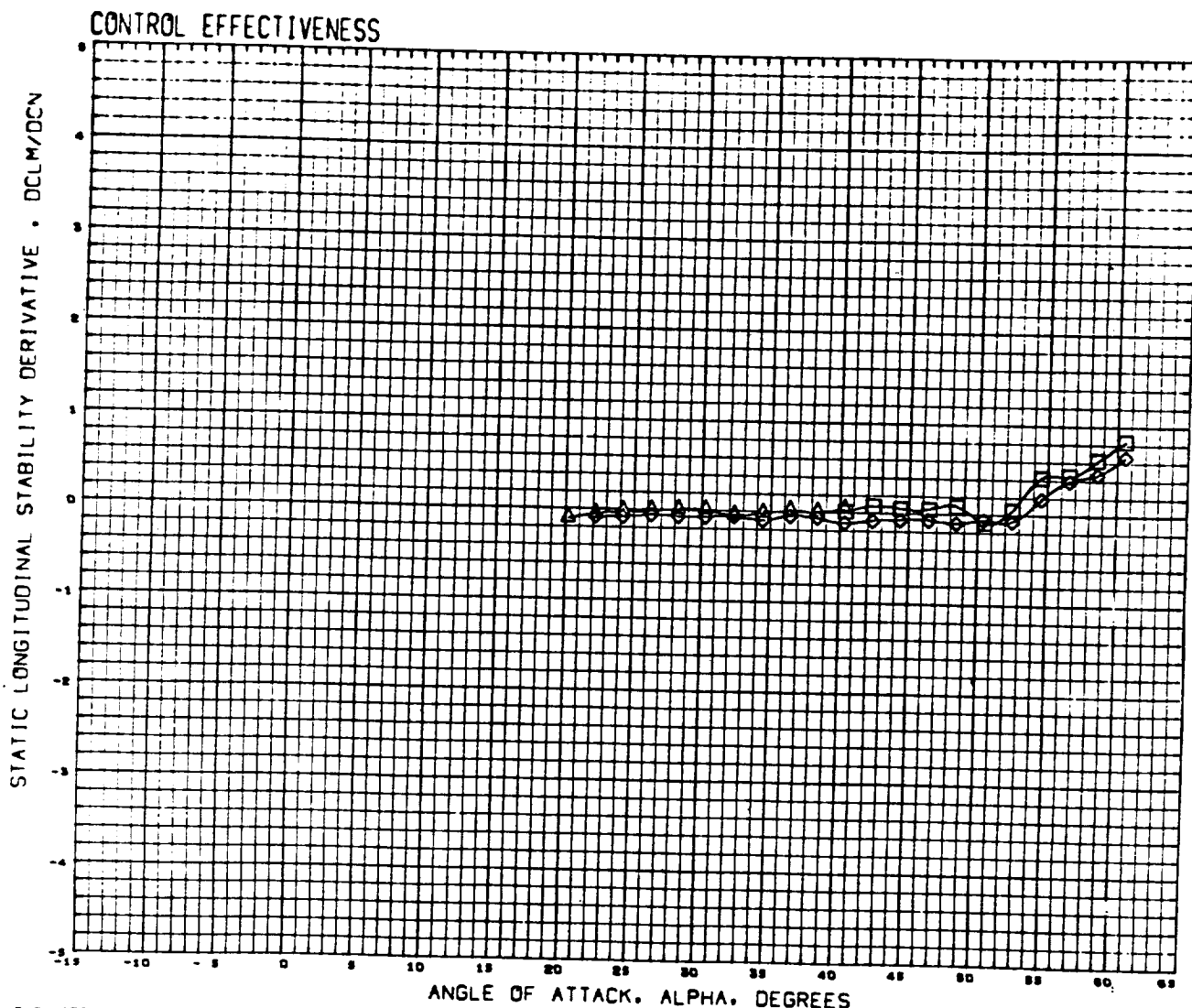
DATA SET SYMBOL		CONFIGURATION DESCRIPTION		ANGLE OF ATTACK, ALPHA, DEGREES					
(E3811A)		M496-MSFC	AR11981-3	MODEL	W822V2	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3810M)		M496-MSFC	AR11981-3	MODEL	W822V2	0.000	-30.000	0.000	SREF 4.6225 SQ. IN.
(F3809X)		M496-MSFC	AR11981-3	MODEL	W822V2	0.000	-15.000	-15.000	LREF 1.9360 IN.
(E3812Y)		M496-MSFC	AR11981-3	MODEL	W822V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3808A)		M496-MSFC	AR11981-3	MODEL	W822V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(F3807X)		M496-MSFC	AR11981-3	MODEL	W822V2	0.000	15.000	15.000	YMRP 0.0000 IN.
MACH		1.952							ZMRP 0.0000 IN.
									SCALE 0.0025

MACH 1.952



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E30114)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREF 4.6225 50. IN.
(E3010H)	M496-HSFC AR11961-3 MODEL W682V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(F3009X)	M496-HSFC AR11961-3 MODEL W682V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3012K)	M496-HSFC AR11961-3 MODEL W682V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3008A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3007Z)	M496-HSFC AR11961-3 MODEL W682V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 3.400



DATA SET SYMBOL CONFIGURATION DESCRIPTION

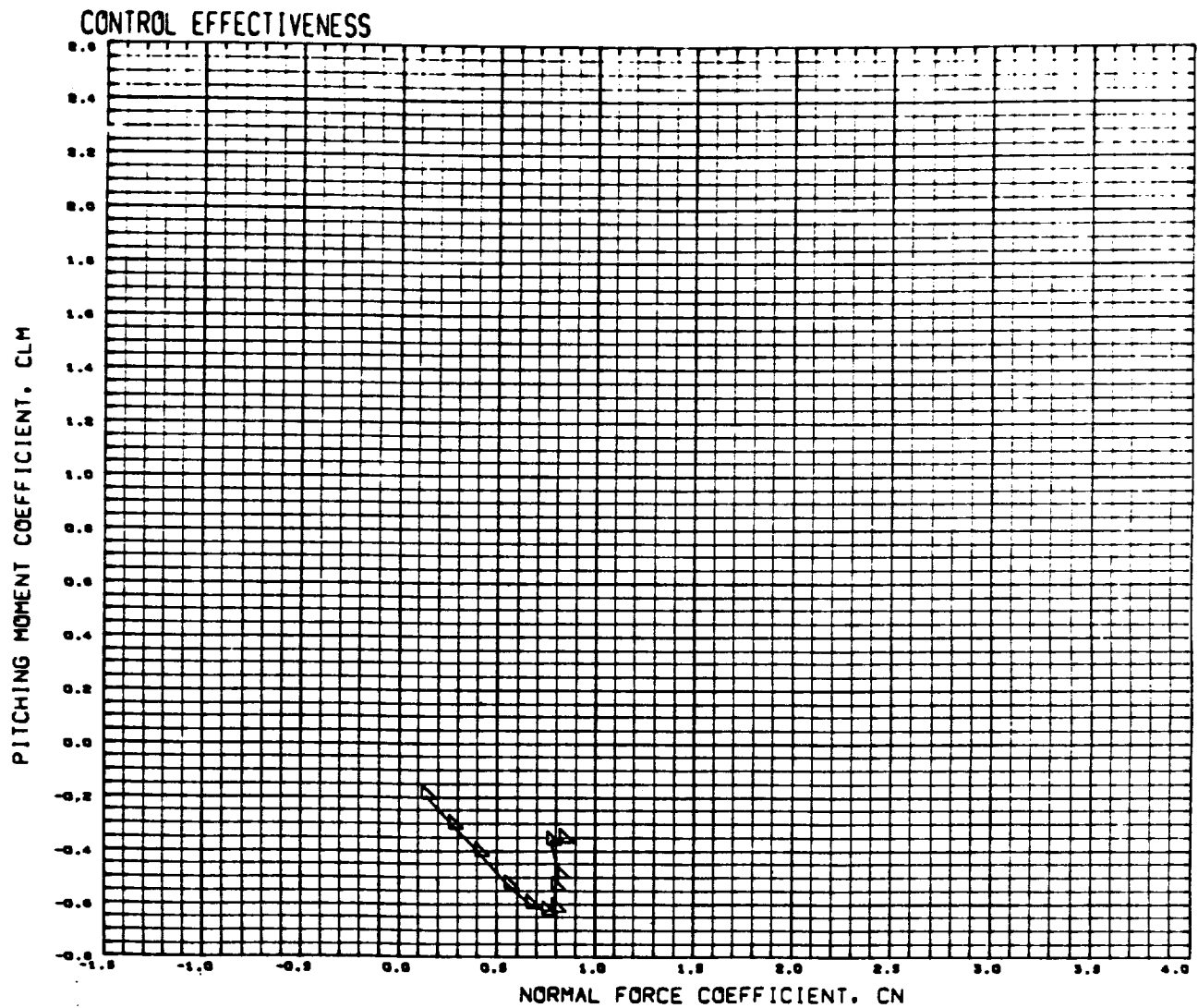
(E3811A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3810M) M496-MSFC AR11981-3 MODEL W622V2
 (F3809X) M496-MSFC AR11981-3 MODEL W622V2
 (E3812A) M496-MSFC AR11981-3 MODEL W622V2
 (E3804A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 4.959

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION

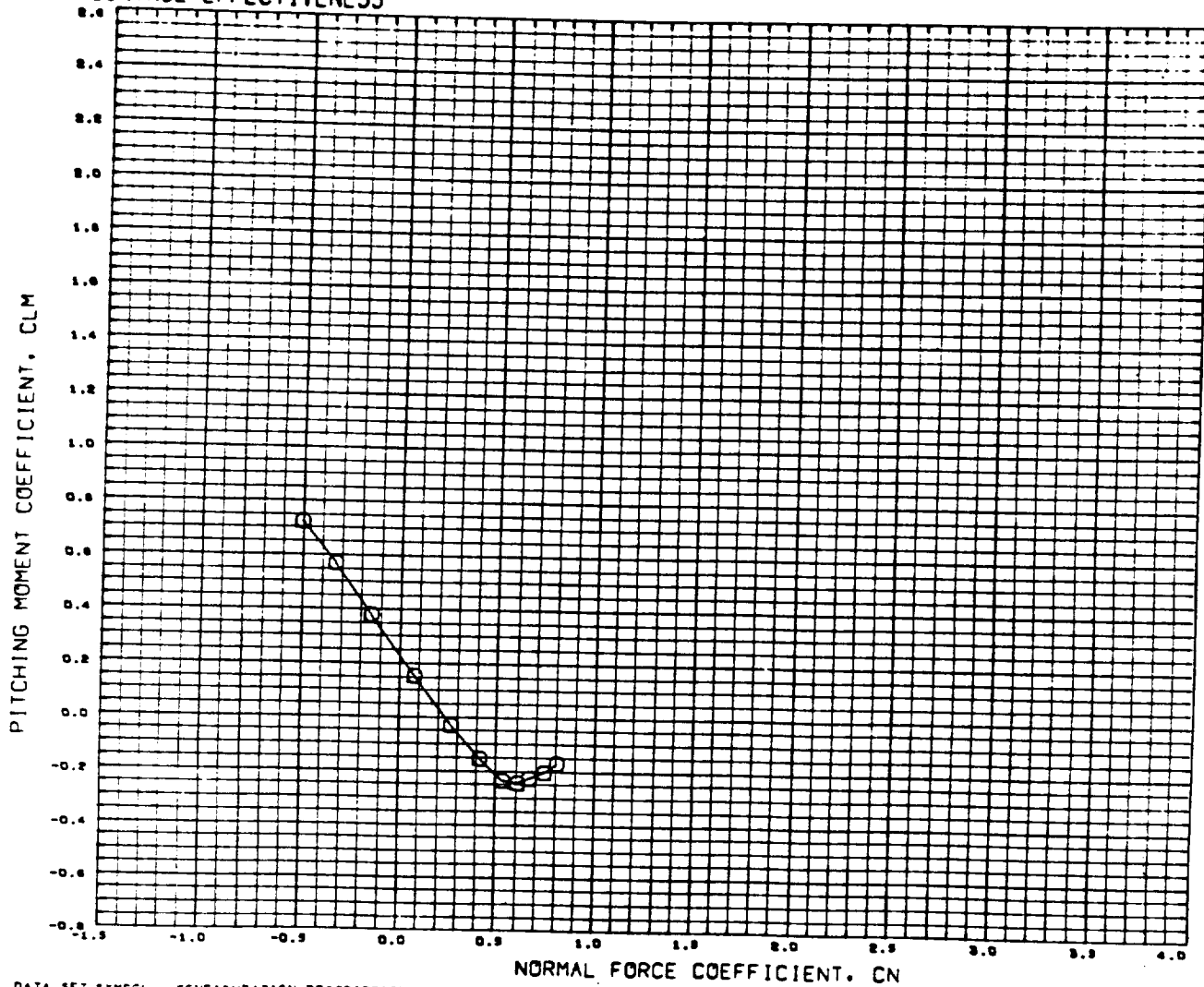
BREF	4.6225	50. IN.
LREF	1.9360	IN.
QREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION	
(E38114)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP	4.6223 50. IN.
(E3810H)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LREP	1.5360 IN.
(F3809E)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	BRP	4.3000 IN.
(E3412K)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000			YMRP	2.4000 IN.
(E3409A)	□	M498-HSFC ART1951-3 MODEL W882V8	0.000	5.000	5.000	YMRP	0.0000 IN.
(F3407X)	□	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP	0.0000 IN.
						SCALE	0.0025

MACH 0.397

CONTROL EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3811A) M496-MSFC ARI1881-3 MODEL W882V2
 (E3810H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3812K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3808A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

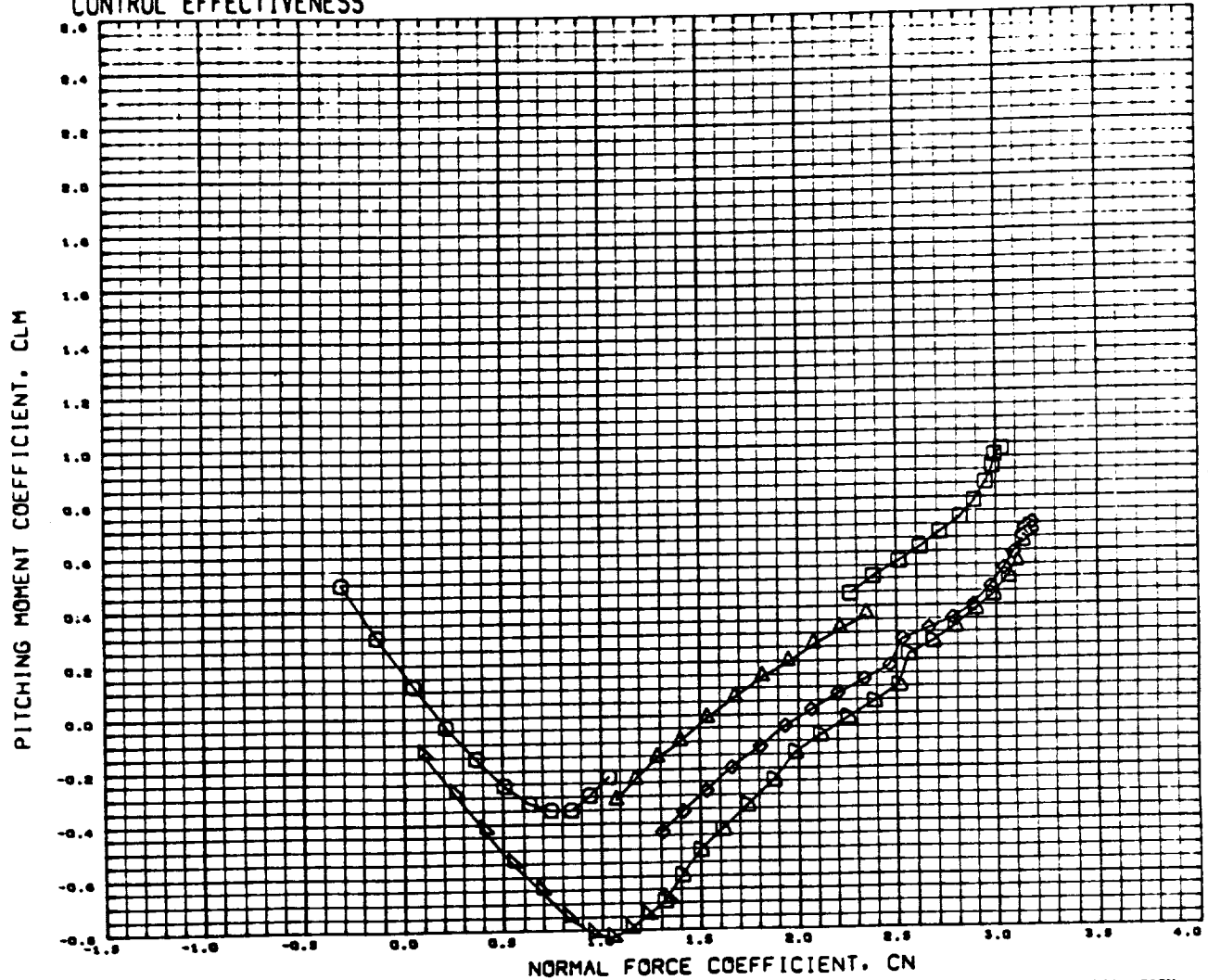
MACH 0.899

NORMAL FORCE COEFFICIENT, CN

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.2360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

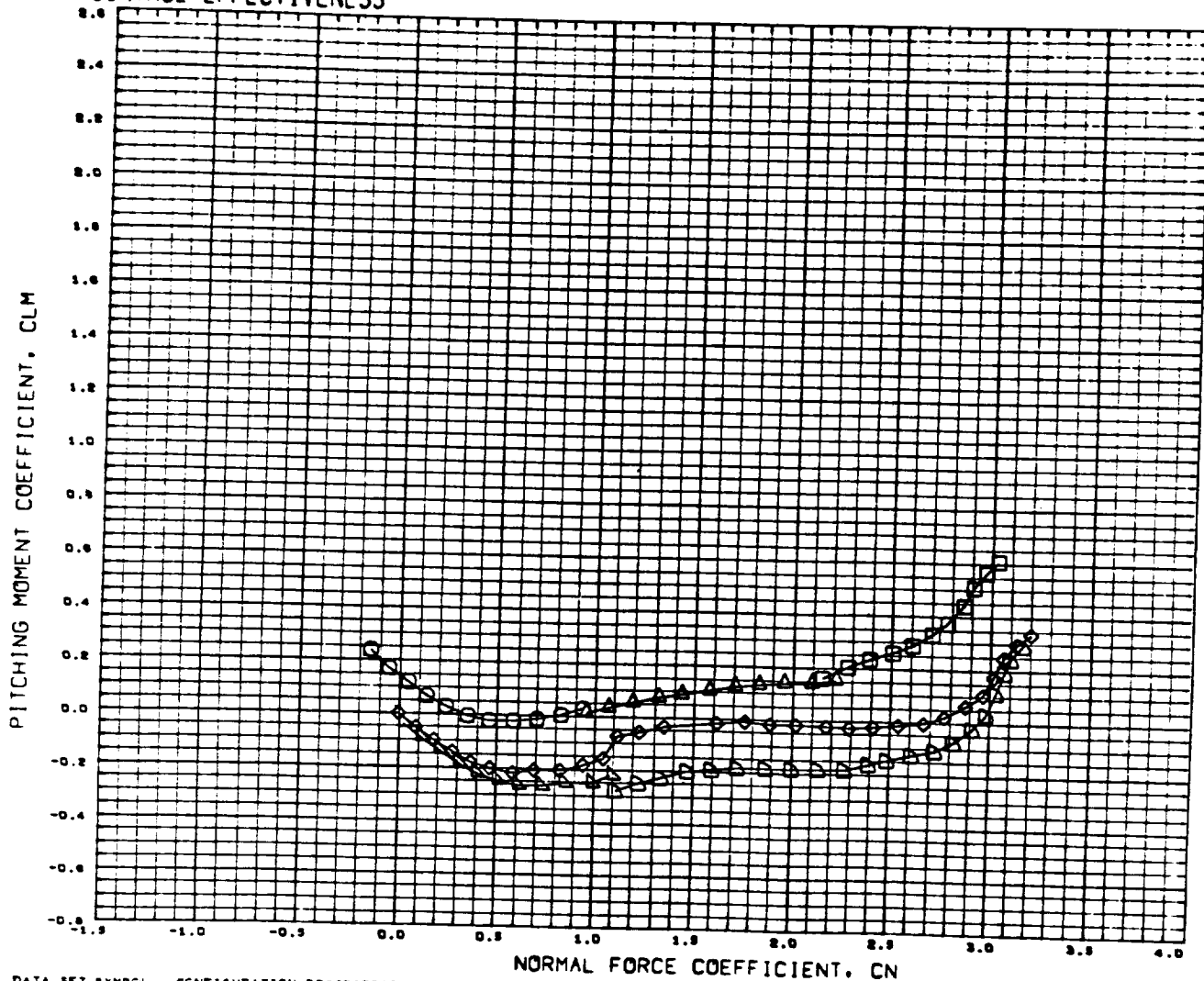
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	REFERENCE INFORMATION
(E3811A)	N496-NSFC AR11981-3 MODEL W882V2	0.000	-30.000	0.000	SREF 4.6225 53. IN.
(E3810M)	N496-NSFC AR11981-3 MODEL W882V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(F3808X)	N496-NSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3812K)	N496-NSFC AR11981-3 MODEL W882V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3808A)	N496-NSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3807X)	N496-NSFC AR11981-3 MODEL W882V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.100

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3811A)	M496-MSFC AR11981-3 MODEL
(E391DM)	M496-MSFC AR11981-3 MODEL
(F3509X)	M496-MSFC AR11981-3 MODEL
(E3A12K)	M496-MSFC AR11981-3 MODEL
(E3A0AA)	M496-MSFC AR11981-3 MODEL
(F3A07X)	M496-MSFC AR11981-3 MODEL

MACH 1.932

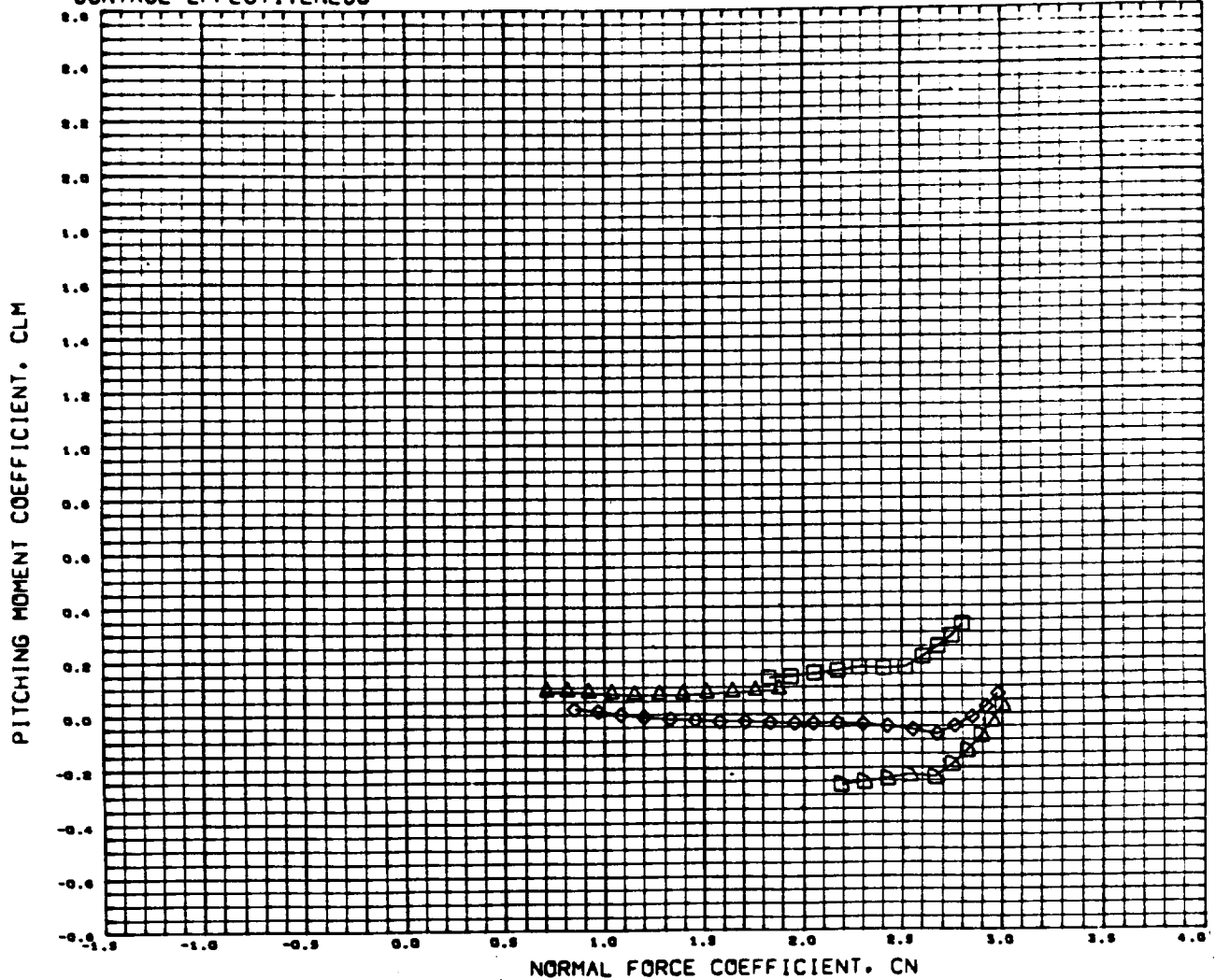
NORMAL FORCE COEFFICIENT, CN

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION

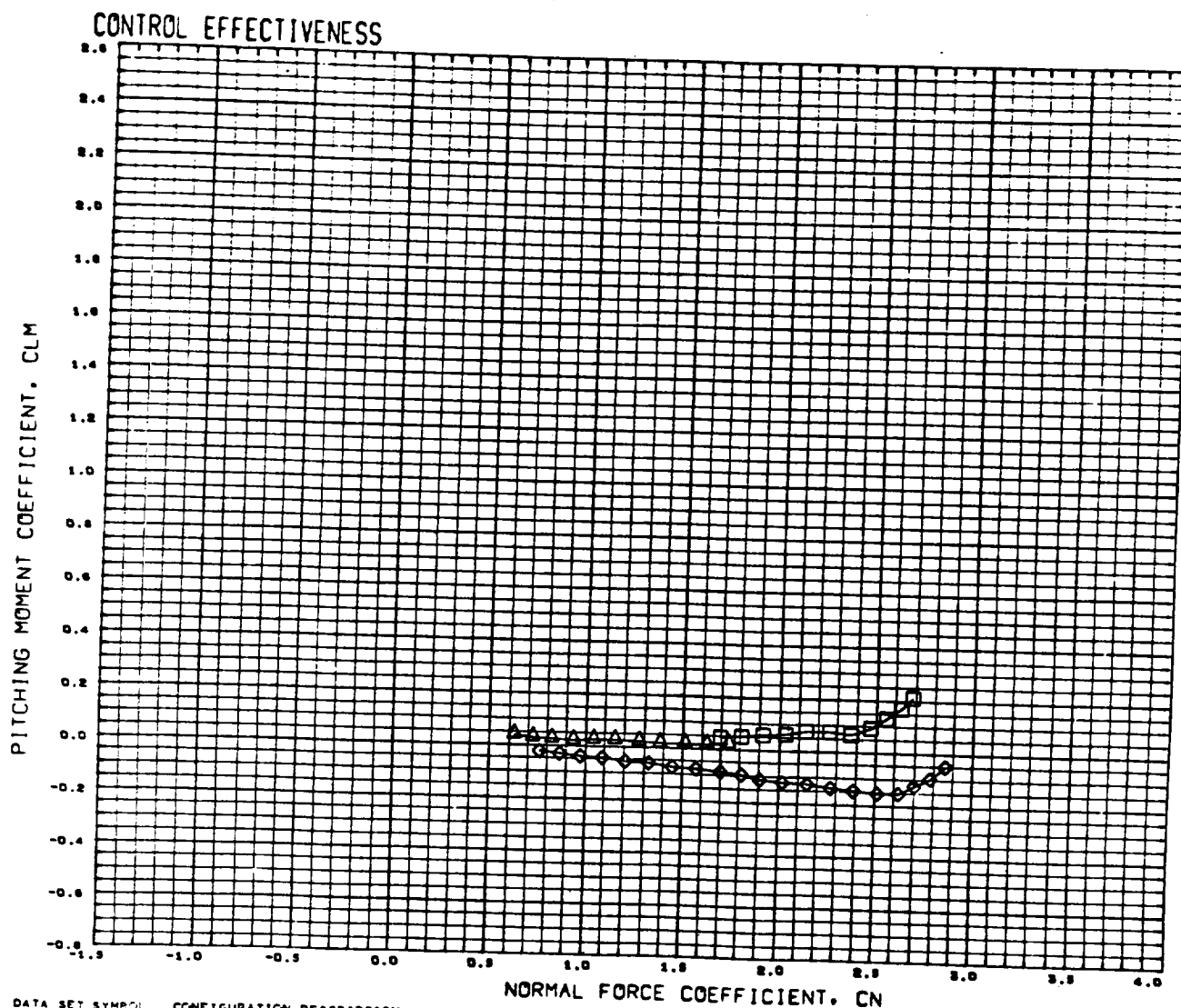
SREF	4.6225	50. IN.
LREF	1.9360	IN.
SREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.6225 53. IN.
(E3010H)	N498-HSFC AR11981-3 MODEL W82V2	0.000	-15.000	-15.000	LREP 1.5360 IN.
(F3009E)	N498-HSFC AR11981-3 MODEL W82V2	0.000	0.000	0.000	BRP 4.3000 IN.
(E3012K)	N498-HSFC AR11981-3 MODEL W82V2	0.000	5.000	5.000	XRHP 2.4000 IN.
(E3006A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YMRP 0.0000 IN.
(F3007E)	N498-HSFC AR11981-3 MODEL W82V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 3.400



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(E3811A) DATA NOT AVAILABLE FOR ALL CONDITIONS

(E3810H) H496-HSFC AR11981-3 MODEL W682V2

(F3809X) H496-HSFC AR11981-3 MODEL W682V2

(E3812X) H496-HSFC AR11981-3 MODEL W682V2

(E3809A) DATA NOT AVAILABLE FOR ALL CONDITIONS

(F3807X) DATA NOT AVAILABLE FOR ALL CONDITIONS

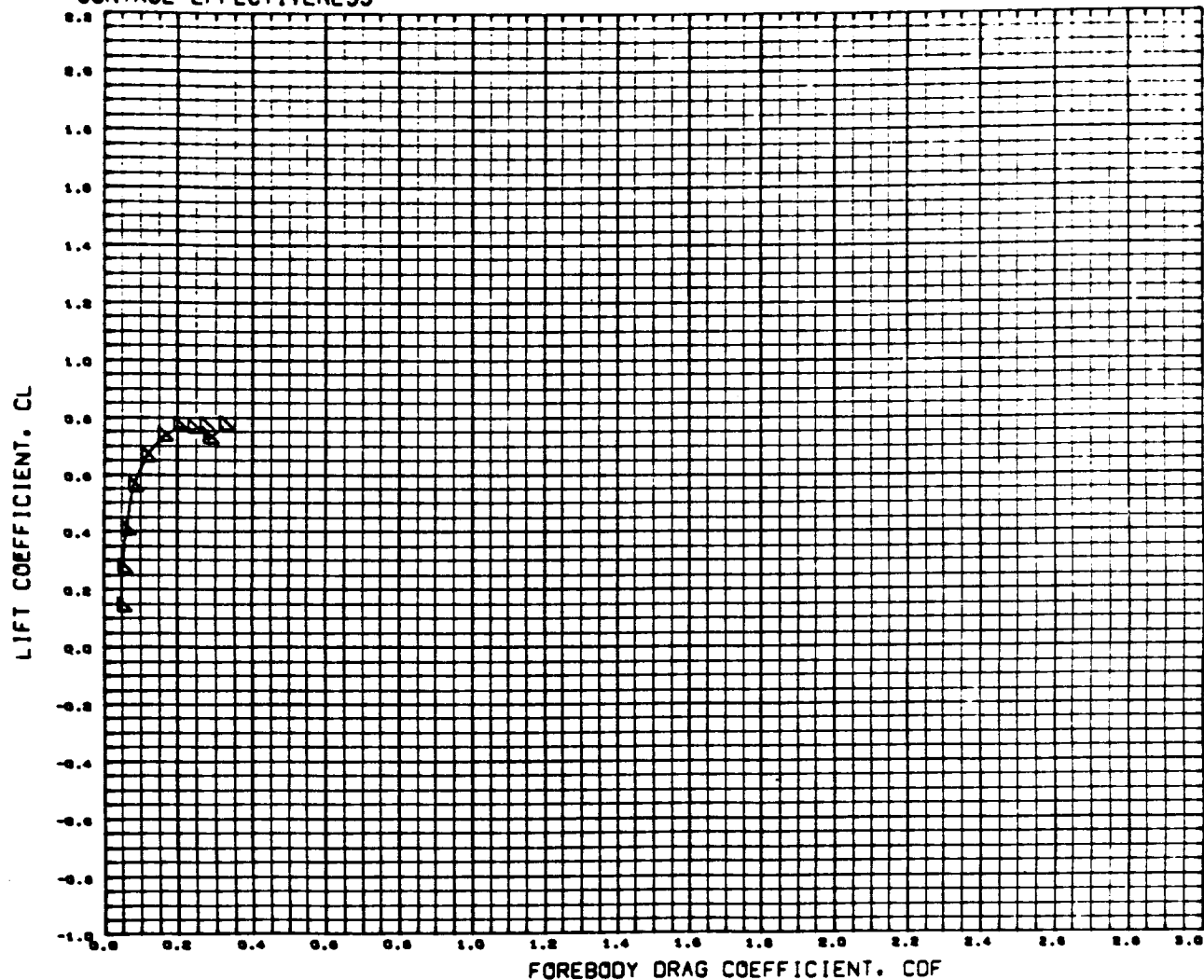
MACH 4.959

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION

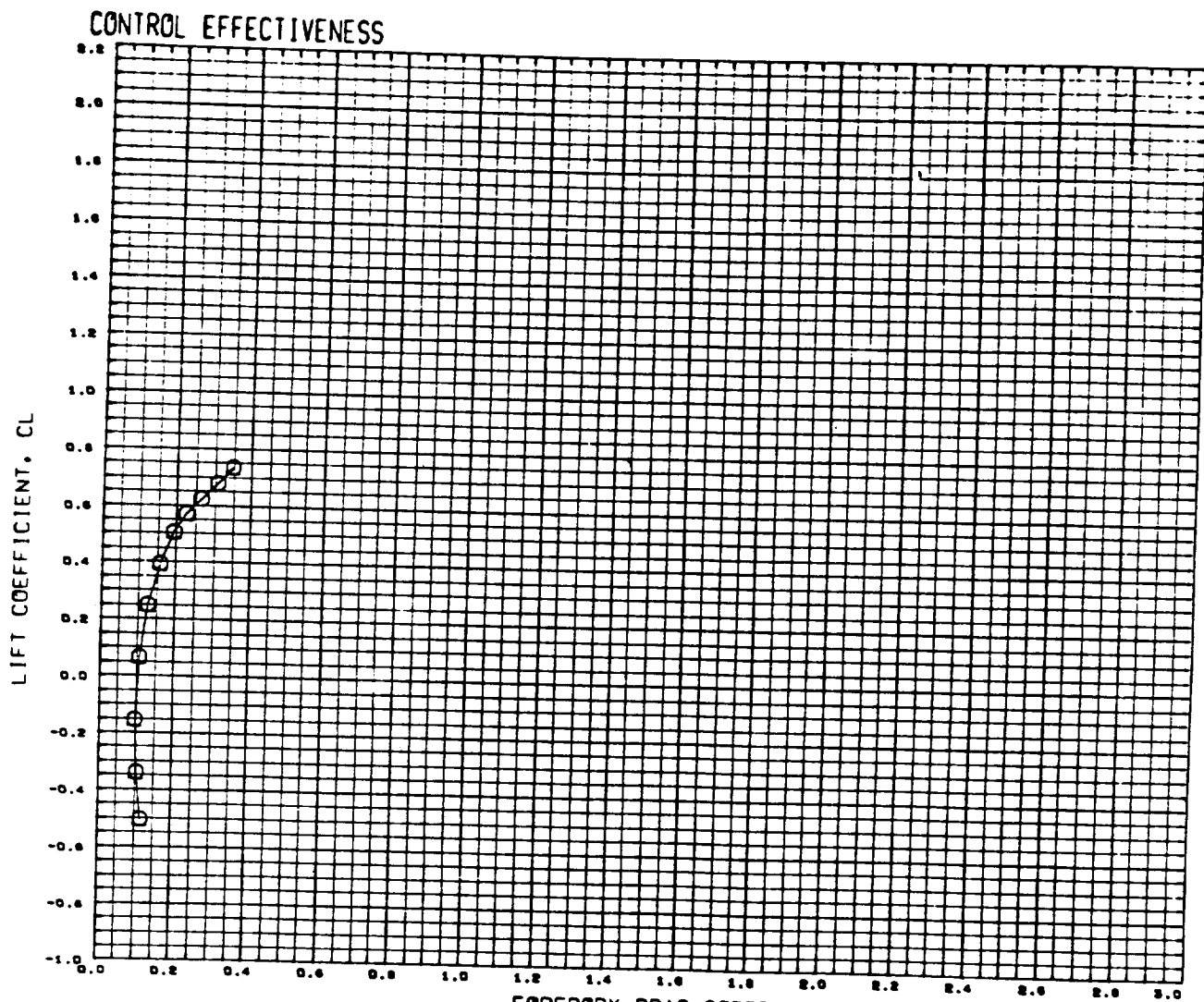
SREP	4.6223	50. IN.
LREP	1.8360	IN.
QREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	REFERENCE INFORMATION
(E3911A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.6225 SQ. IN.
(E3910M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-15.000	-15.000	LREP 1.5360 IN.
(F3909K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	SREP 4.3000 IN.
(E3912K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	XMRP 2.4000 IN.
(E3906A)	M496-HSFC AR11981-3 MODEL W822V2	0.000	5.000	5.000	YMRP 0.0000 IN.
(F3907Z)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 0.597



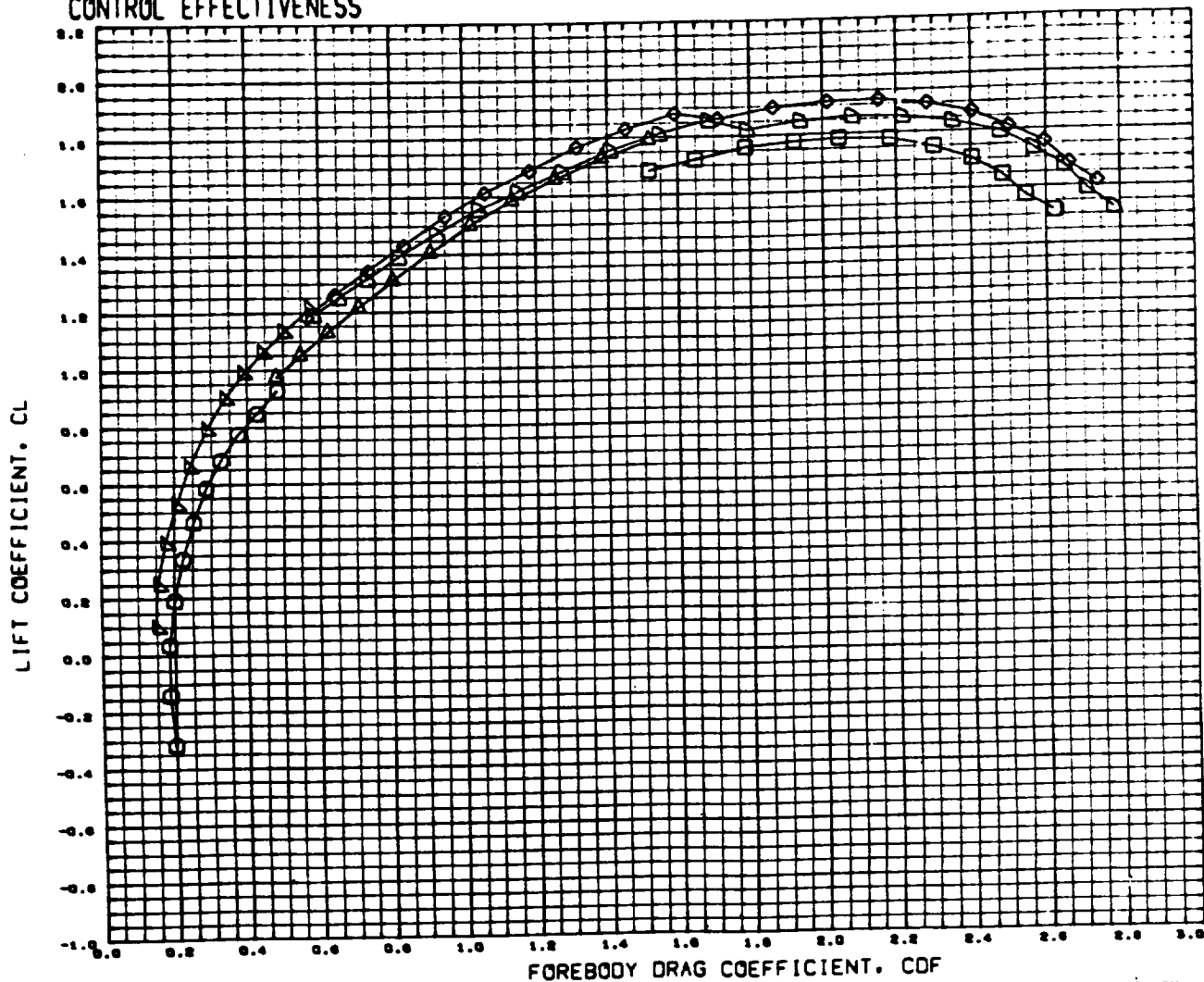
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(E3011A)	M496-MSFC AR11981-3 MODEL W882V2
(E3010H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(F3009X)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3012K)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(E3009A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(F3007X)	DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 0.898

BETA	ELEVTR	ATLRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	9.000	9.000
0.000	15.000	15.000

REFERENCE INFORMATION	
SREF	4.0225 SQ. IN.
LREF	1.9360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

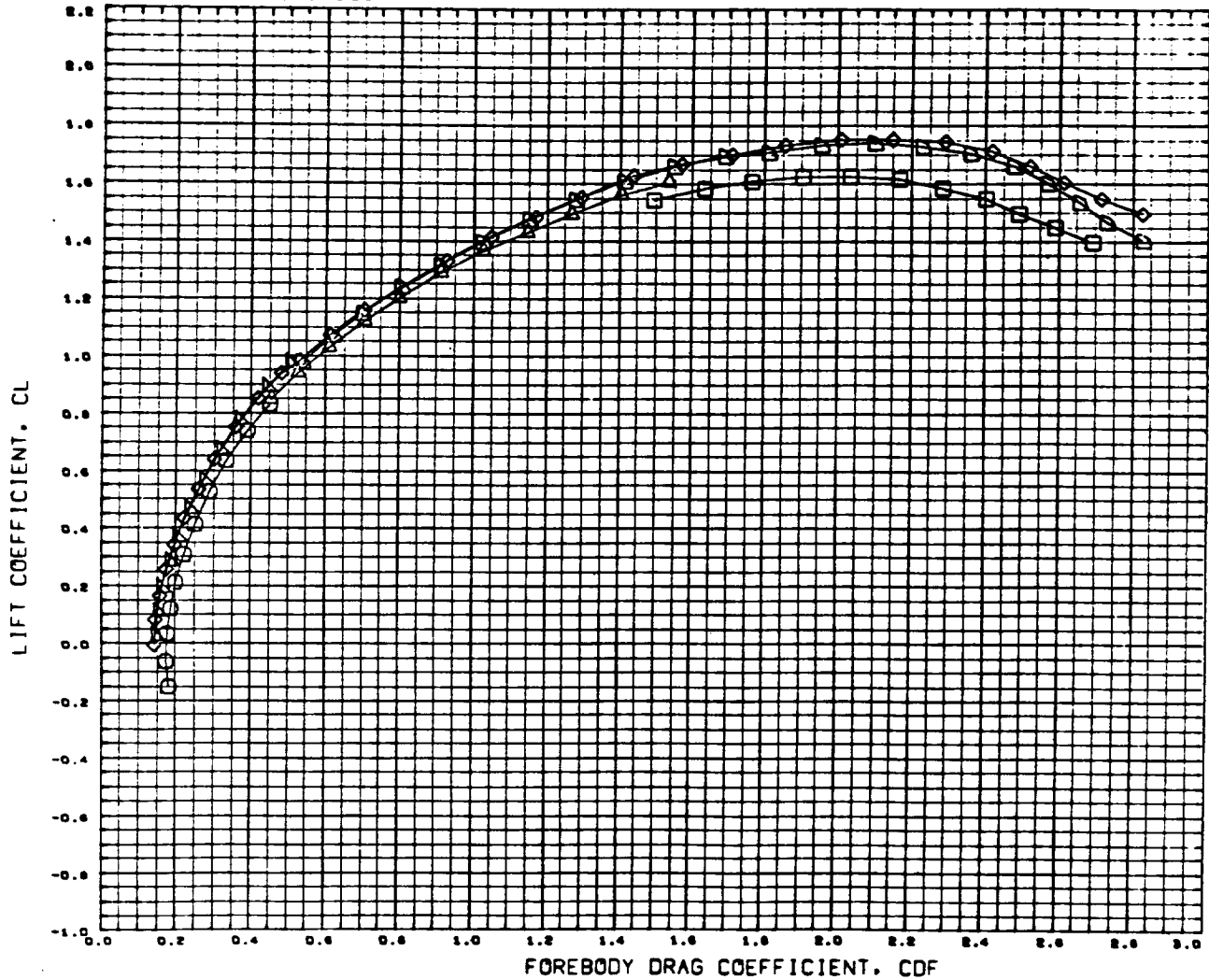
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	M496-NSPC AR11981-3 MODEL W82V2	0.000	-30.000	0.000	SREF 4.6225 SQ. IN.
(E3010M)	M496-NSPC AR11981-3 MODEL W82V2	0.000	-15.000	-15.000	LREF 1.5360 IN.
(P3009X)	M496-NSPC AR11981-3 MODEL W82V2	0.000	0.000	0.000	BREF 4.3000 IN.
(E3012R)	M496-NSPC AR11981-3 MODEL W82V2	0.000	5.000	5.000	XMRP 2.4000 IN.
(E3008A)	M496-NSPC AR11981-3 MODEL W82V2	0.000	15.000	15.000	YMRP 0.0000 IN.
(P3007X)	M496-NSPC AR11981-3 MODEL W82V2	0.000	15.000	15.000	ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.199

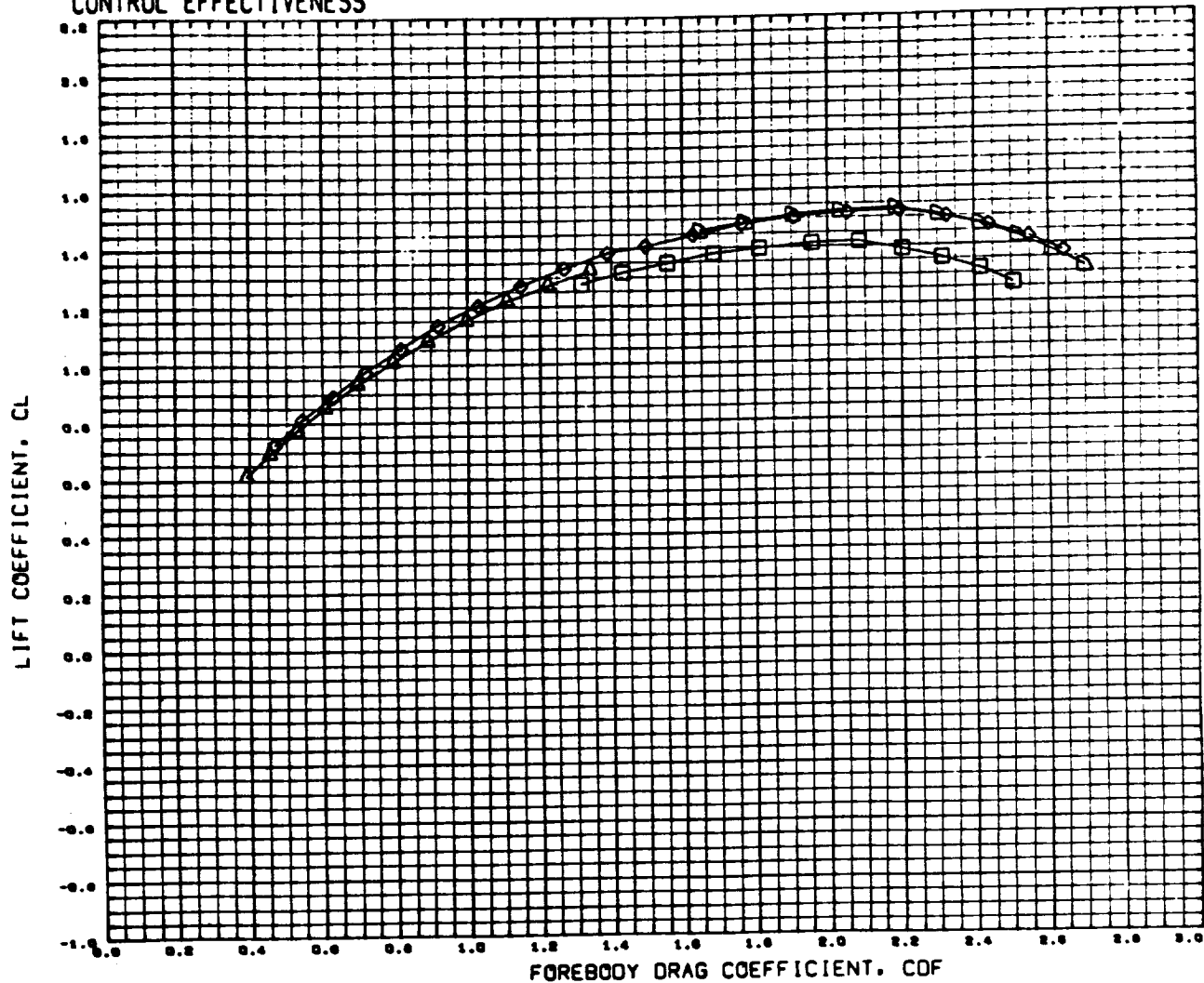
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3811A)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	-30.000	0.000	SREF 4.6225 30. IN.
(E3810M)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	-15.000	-15.000	LREF 1.9360 IN.
(F3809X)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	0.000	0.000	SREF 4.9000 IN.
(E3812A)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	0.000	0.000	ZHRP 2.4000 IN.
(E3808A)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	0.000	0.000	YHRP 0.0000 IN.
(F3807X)	M496-MSFC AR11981-3 MCOEL W882V2	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0025

MACH 1.932

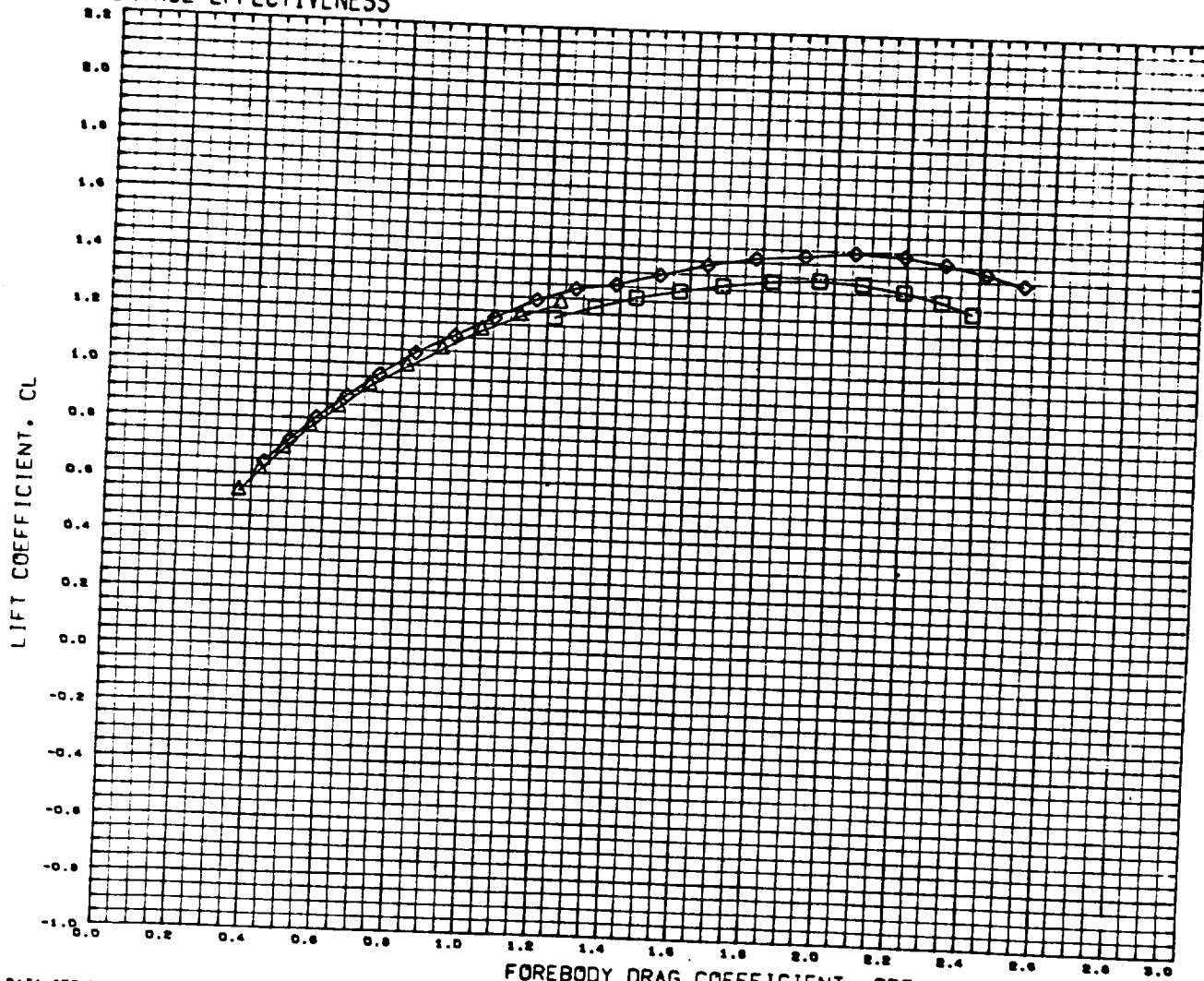
CONTROL EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	REFERENCE INFORMATION
(E3011A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	-30.000	0.000	SREP 4.8225 SQ. IN.
(E3010H)	N498-NSFC AR11981-3 MODEL W82V2	0.000	-15.000	-15.000	LREP 1.5360 IN.
(P3009H)	N498-NSFC AR11981-3 MODEL W82V2	0.000	0.000	0.000	BREP 4.3000 IN.
(E3012H)	N498-NSFC AR11981-3 MODEL W82V2	0.000	5.000	5.000	XHRP 2.4000 IN.
(E3006A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	15.000	15.000	YHRP 0.0000 IN.
(P3007H)	N498-NSFC AR11981-3 MODEL W82V2	0.000	15.000	15.000	ZHRP 0.0000 IN.
					SCALE 0.0025

MACH 3.400

CONTROL EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (E3811A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (E3810M) M496-MSFC AR11981-3 MODEL W8B2V2
 (F3809X) M496-MSFC AR11981-3 MODEL W8B2V2
 (E3812K) M496-MSFC AR11981-3 MODEL W8B2V2
 (E3808A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3807K) DATA NOT AVAILABLE FOR ALL CONDITIONS
 MACH 4.958

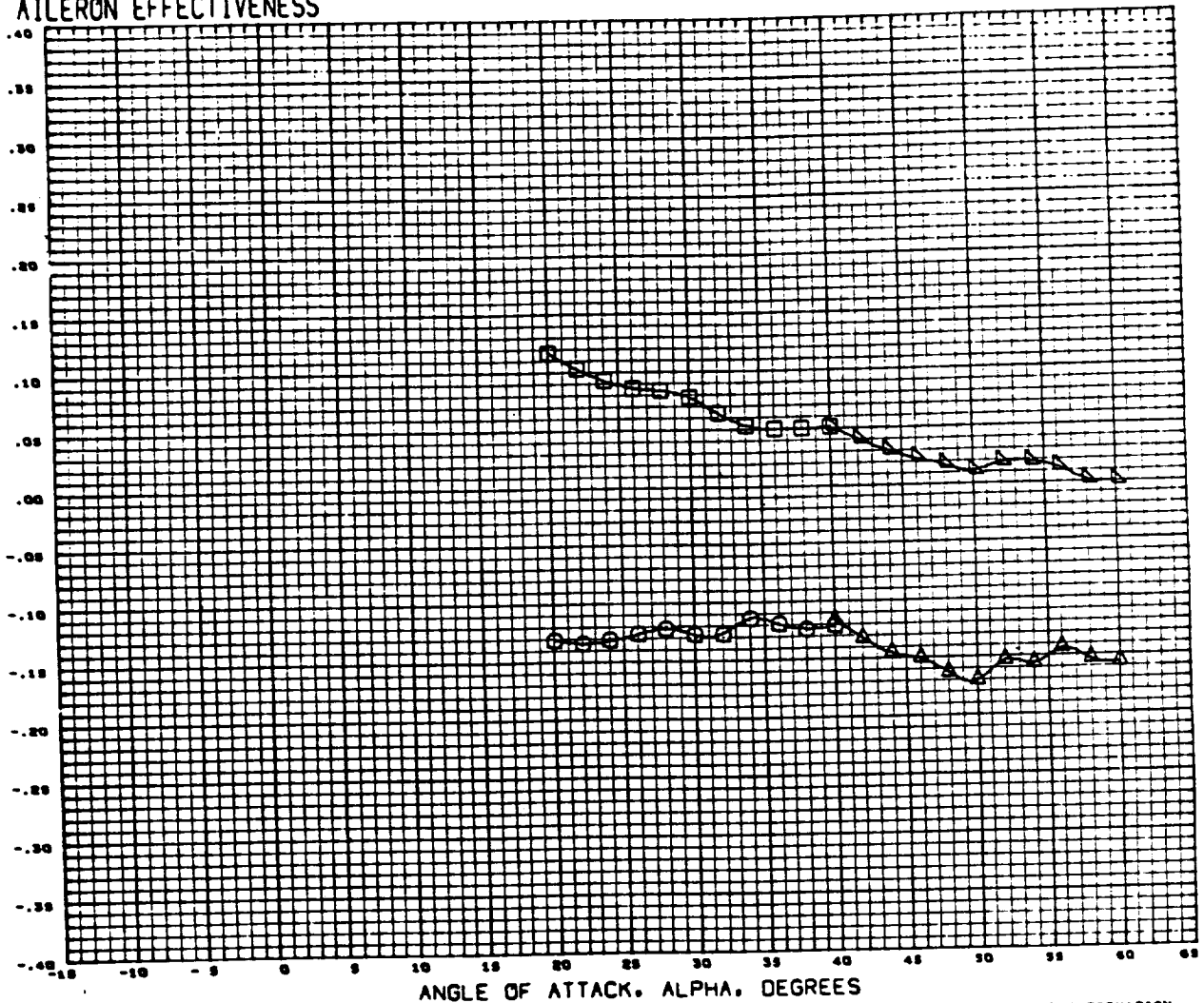
FOREBODY DRAG COEFFICIENT, CDF

BETA	ELEVTR	AILRON
0.000	-30.000	0.000
0.000	-15.000	-15.000
0.000	0.000	0.000
0.000	5.000	5.000
0.000	15.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

AILERON EFFECTIVENESS

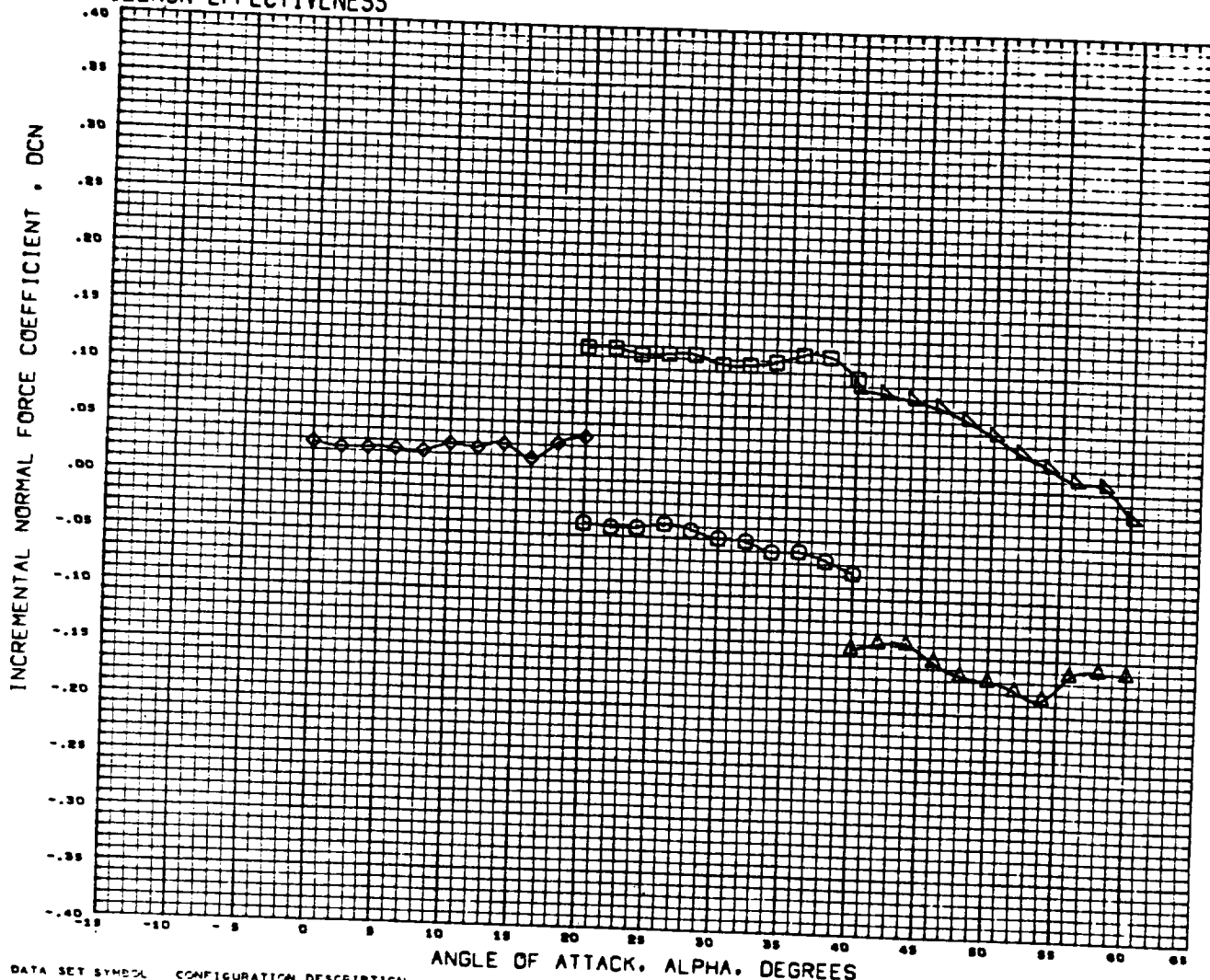
INCREMENTAL NORMAL FORCE COEFFICIENT • DCN



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3010H)	M496-HSPC AR11981-3 WOEEL W822V2	-30.000	0.000	-15.000	SREF 4.6225 50.1N.
(K3012H)	M496-HSPC AR11991-3 WOEEL W822V2	0.000	0.000	0.000	LREF 1.5360 1N.
(K3009A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	SREF 4.3000 1N.
(K3007H)	M496-HSPC AR11981-3 WOEEL W822V2	30.000	0.000	15.000	XMRP 2.4000 1N.
(K3007H)	M496-HSPC AR11991-3 WOEEL W822V2	30.000	0.000	15.000	YMRP 0.0000 1N.
					ZMRP 0.0000 1N.
					SCALE 0.0025

MACH 1.200

AILERON EFFECTIVENESS

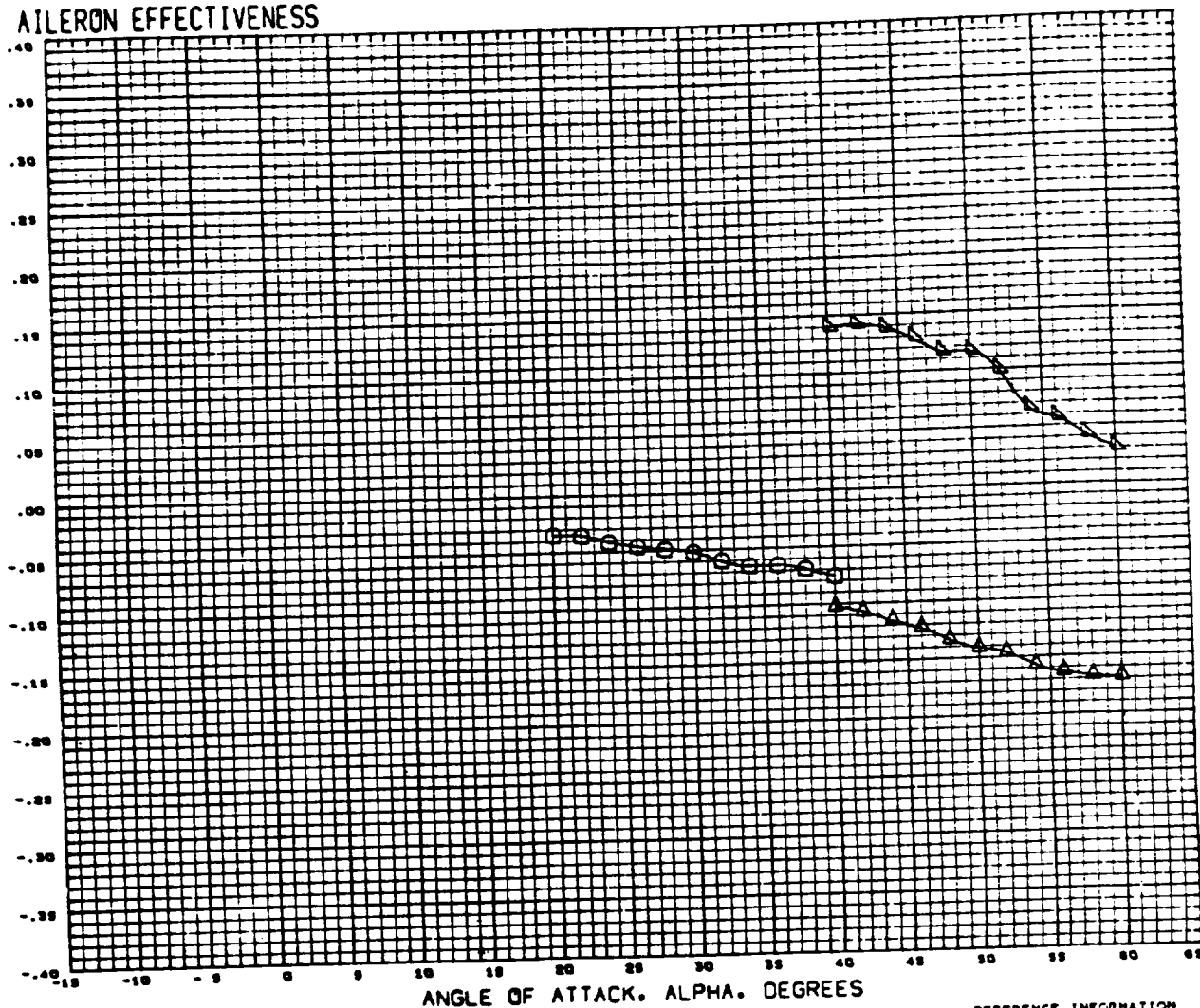


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3910H)	M496-MSFC AR11991-3 MODEL	-30.000	0.000	-15.000	SREF 4.6223 sq. in.
(K3912K)	M496-MSFC AR11991-3 MODEL	0.000	0.000	0.000	LREF 1.9360 in.
(K3909A)	M496-MSFC AR11991-3 MODEL	10.000	0.000	5.000	SREF 4.3000 in.
(K3907H)	M496-MSFC AR11991-3 MODEL	30.000	0.000	15.000	YMRP 2.4000 in.
(K3907H)	M496-MSFC AR11991-3 MODEL	30.000	0.000	15.000	ZMRP 0.0000 in.
					SCALE 0.0025 in.

MACH 1.960

AILERON EFFECTIVENESS

INCREMENTAL NORMAL FORCE COEFFICIENT • DCN

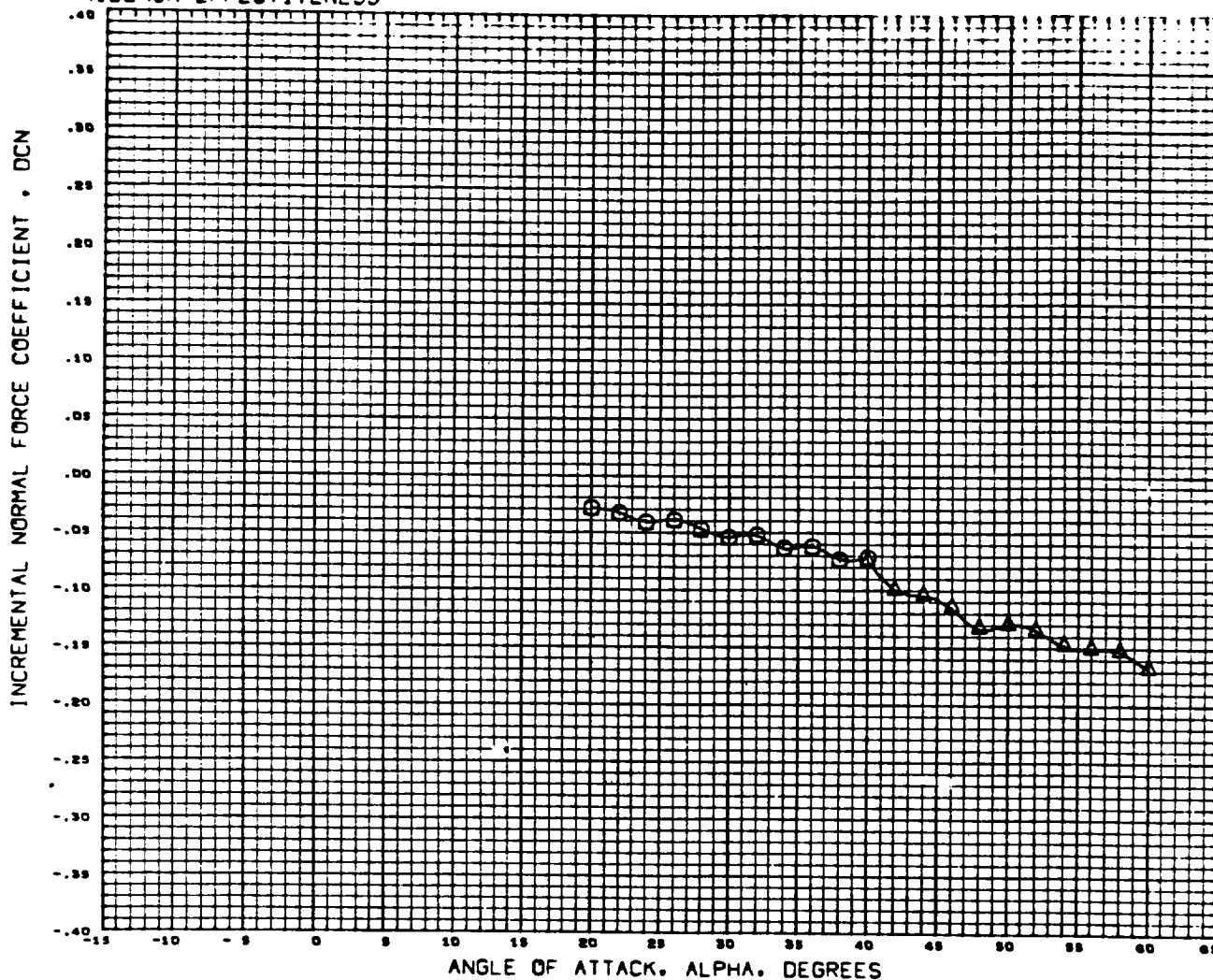


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON
(K3010M)	H496-NSPC AR11991-3 MODEL W882V2	-30.000	0.000	-15.000
(K3012K)	H496-NSPC AR11991-3 MODEL W882V2	0.000	0.000	0.000
(K3008A)	H496-NSPC AR11991-3 MODEL W882V2	10.000	0.000	5.000
(K3007M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000
(K3007K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH 3.900

AILERON EFFECTIVENESS

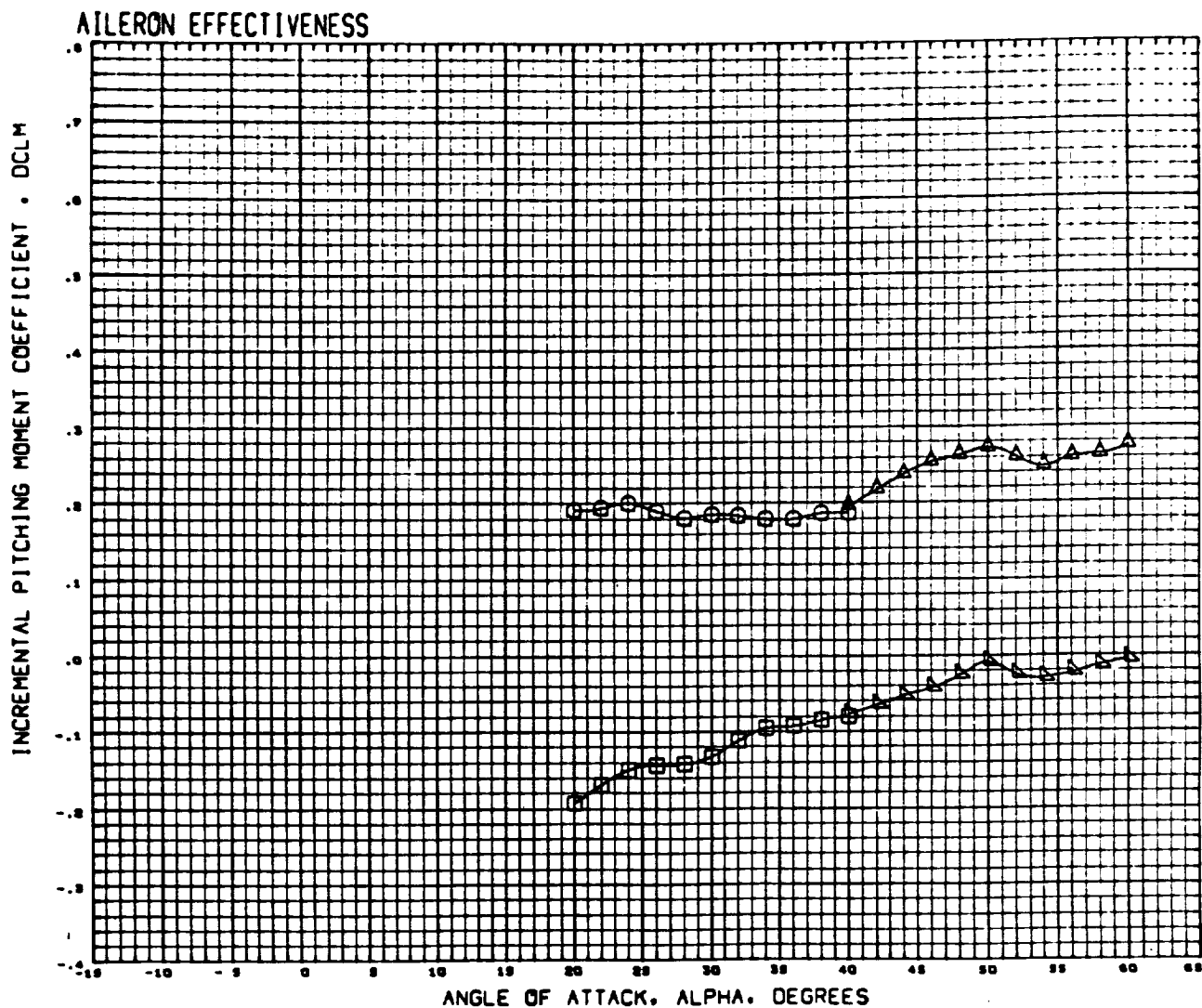



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (K39104) M496-MSFC AR11951-3 MODEL W6B2V2
 (K39127) M496-MSFC AR11951-3 MODEL W6B2V2
 (K39144) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K39174) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K39175) DATA NOT AVAILABLE FOR ALL CONDITIONS

DEL DER AILERON
 -30.000 0.000 -15.000
 0.000 0.000 0.000
 10.000 0.000 5.000
 30.000 0.000 15.000
 30.000 0.000 15.000

REFERENCE INFORMATION
 SREF 4.8225 SQ. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

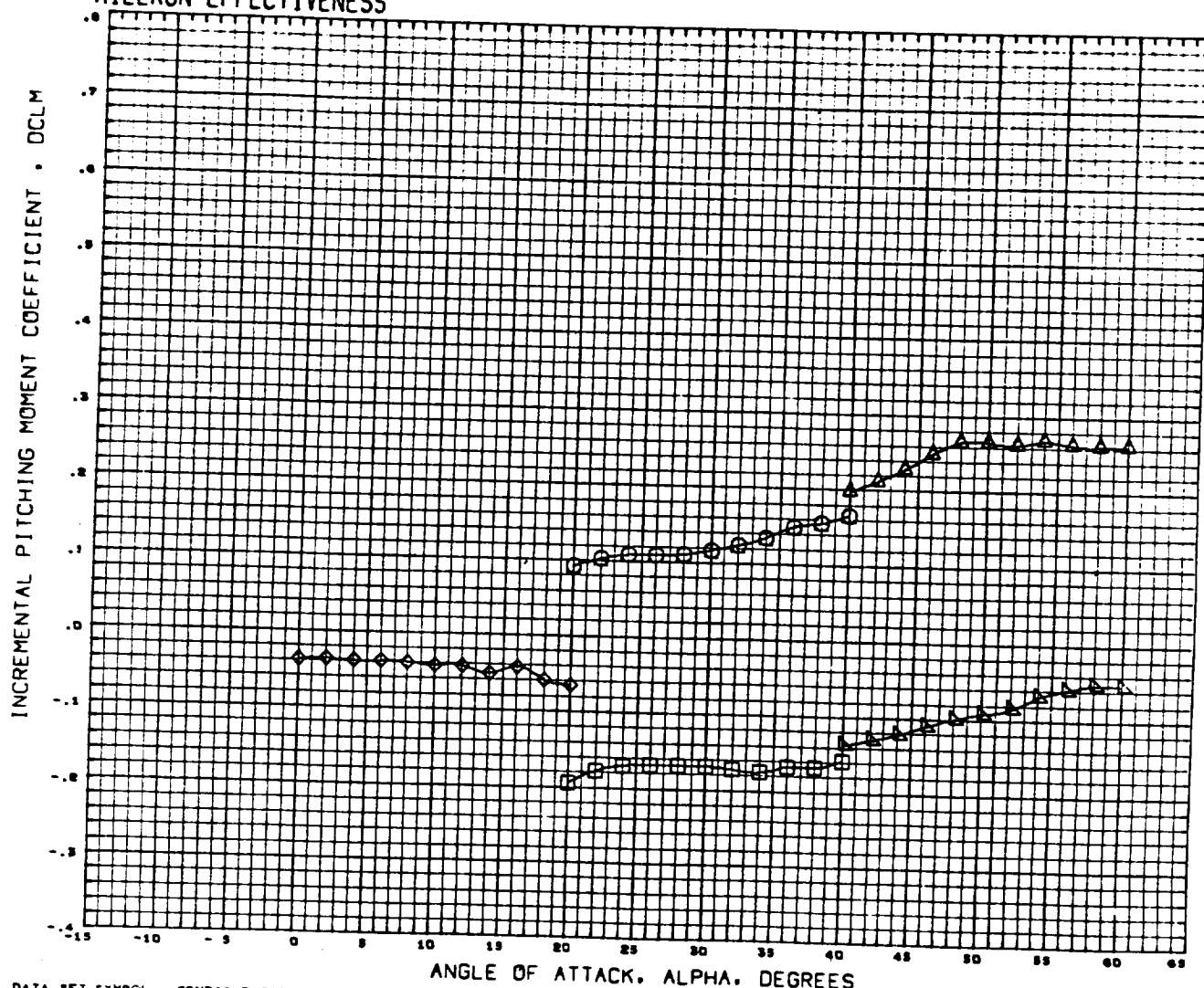
MACH 4.980



DATA SET SYMBOL		CONFIGURATION DESCRIPTION				DEL	DER	AILRON	REFERENCE INFORMATION		
(K3010H)		H496-MSFC	AR11981-3	MODEL	W882V2	-30.000	0.000	-15.000	SRFP	4.6225 53. IN.	
(K3012K)		H496-MSFC	AR11981-3	MODEL	W882V2	0.000	0.000	0.000	LRFP	1.3340 IN.	
(K3008A)		DATA NOT AVAILABLE FOR ALL CONDITIONS					10.000	0.000	5.000	BRFP	4.3000 IN.
(K3007H)		H496-MSFC	AR11981-3	MODEL	W882V2	30.000	0.000	15.000	XRFP	2.4000 IN.	
(K3007K)		H496-MSFC	AR11981-3	MODEL	W882V2	30.000	0.000	15.000	YMRP	0.0000 IN.	
									ZMRP	0.0000 IN.	
									SCALE	0.0025	
MACH		1.200									

MACH 1.200

AILERON EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(K3810H)	M496-MSFC	AR11981-3	MODEL	WB82V2
(K3812K)	M496-MSFC	AR11981-3	MODEL	WB82V2
(K3809A)	M496-MSFC	AR11981-3	MODEL	WB82V2
(K3807H)	M496-MSFC	AR11981-3	MODEL	WB82V2
(K3807K)	M496-MSFC	AR11981-3	MODEL	WB82V2

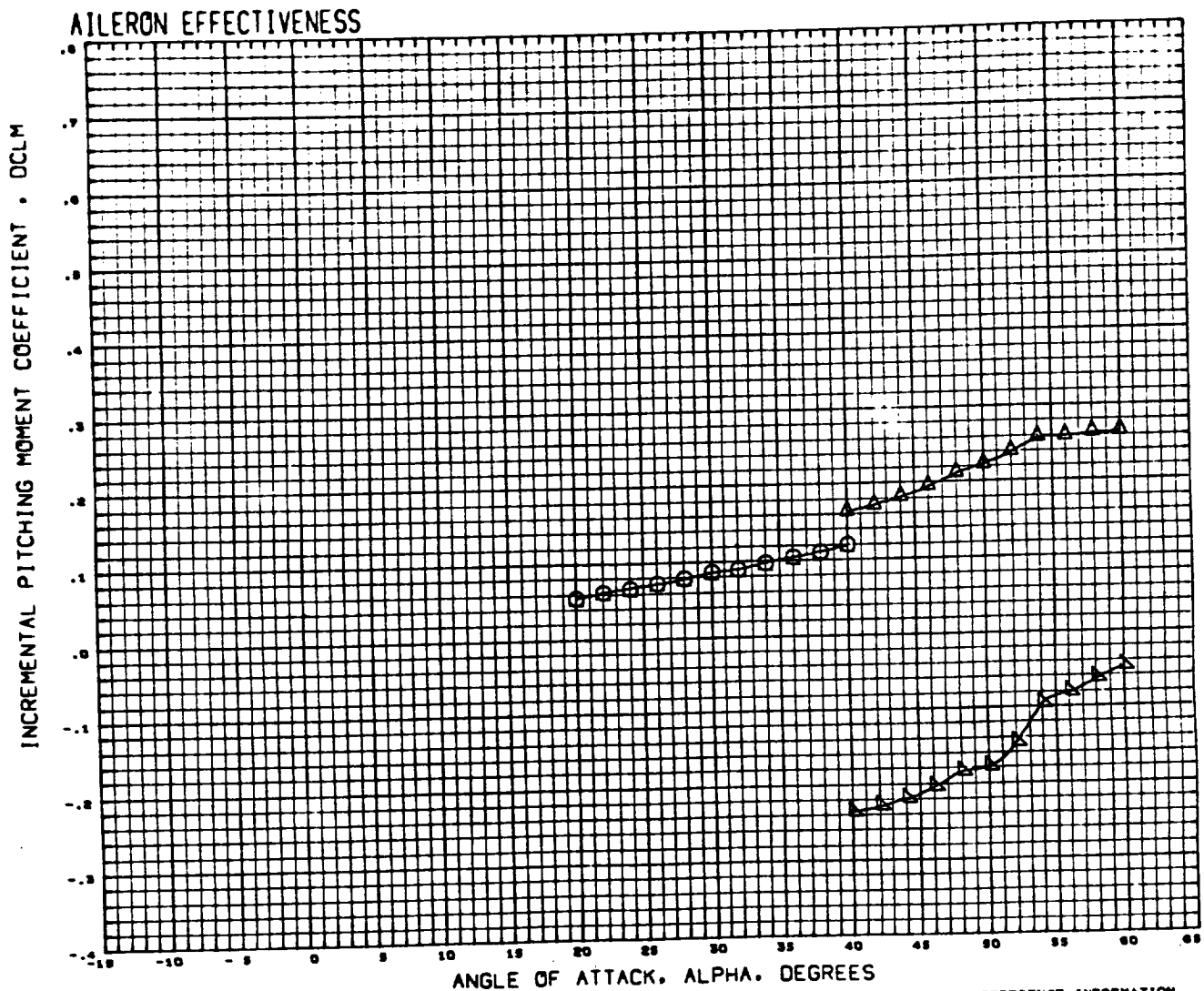
MACH 1.960

ANGLE OF ATTACK, ALPHA, DEGREES

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION

SREF	4.6225	50. IN.
LREF	1.3360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	



DATA SET SYMBOL	CONFIGURATION DESCRIPTION		
(K3810M)	M496-MSFC	AR11981-3	MODEL W882V2
(K3812K)	M496-MSFC	AR11981-3	MODEL W882V2
(K3809A)	DATA NOT AVAILABLE FOR ALL CONDITIONS		
(K3807H)	DATA NOT AVAILABLE FOR ALL CONDITIONS		
(K3807K)	M496-MSFC	AR11981-3	MODEL W882V2

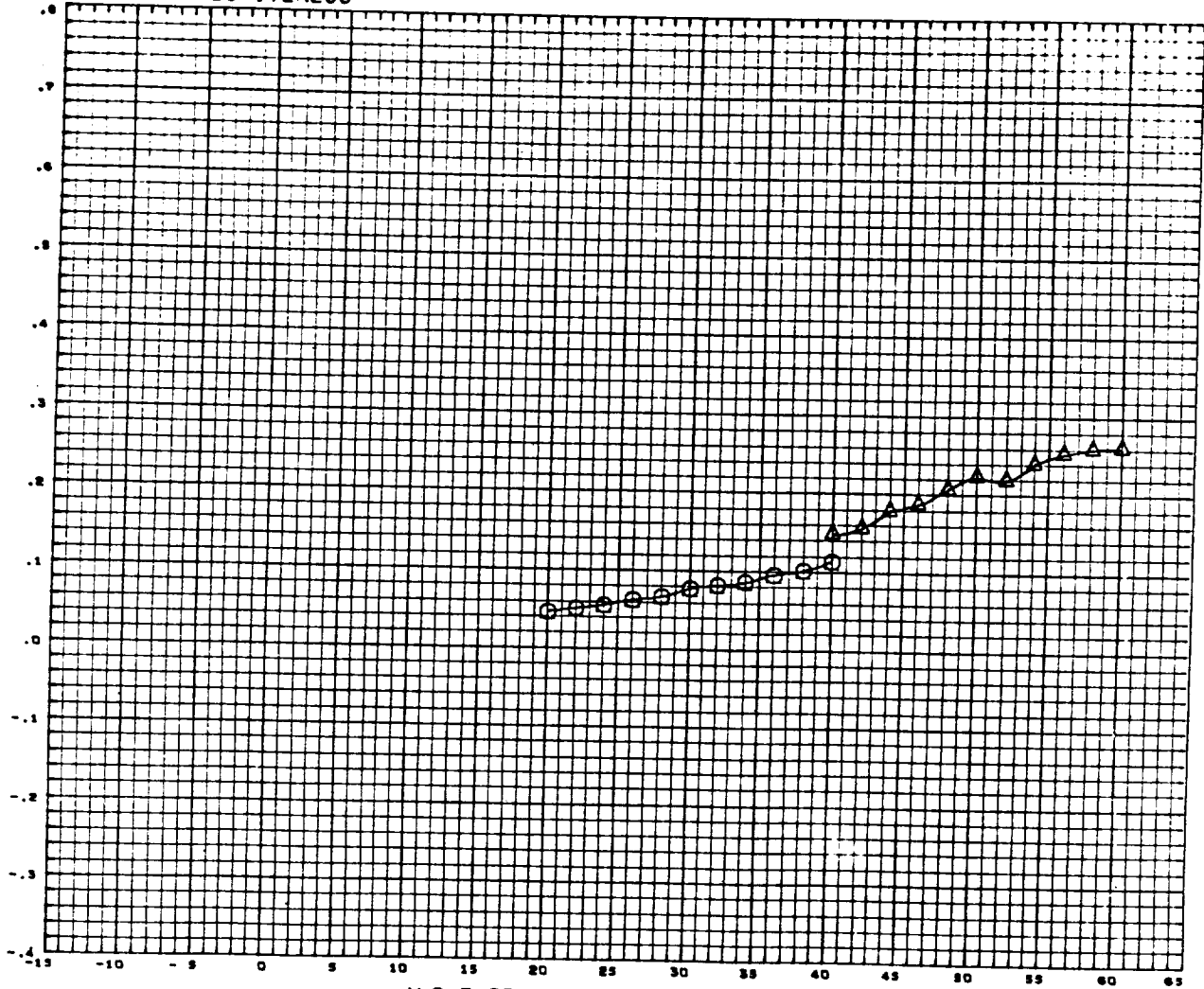
DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.3360 IN.
SRF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH 3.900

AILERON EFFECTIVENESS

INCREMENTAL PITCHING MOMENT COEFFICIENT • ΔC_{LM}



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(R3810H)	M496-MSFC AR11981-3 MODEL W682V2
(R3812K)	M496-MSFC AR11981-3 MODEL W682V2
(R3808A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(R3907H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(R3907K)	DATA NOT AVAILABLE FOR ALL CONDITIONS

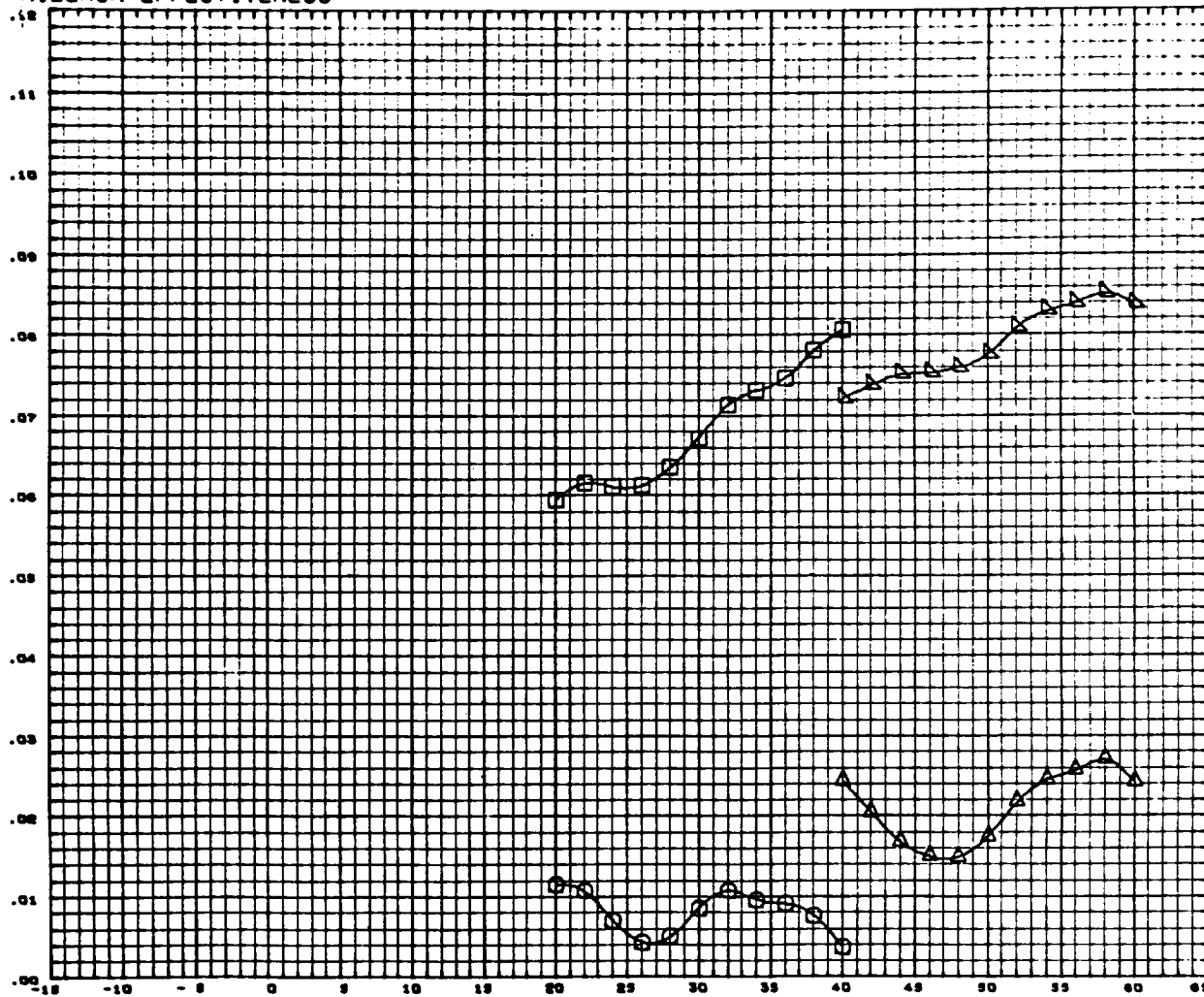
DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 30. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
YNRP	2.4000 IN.
YNRP	0.0000 IN.
YNRP	0.0000 IN.
SCALE	0.0025

MACH 4.960

INCREMENTAL AXIAL FORCE COEFFICIENT, DCA

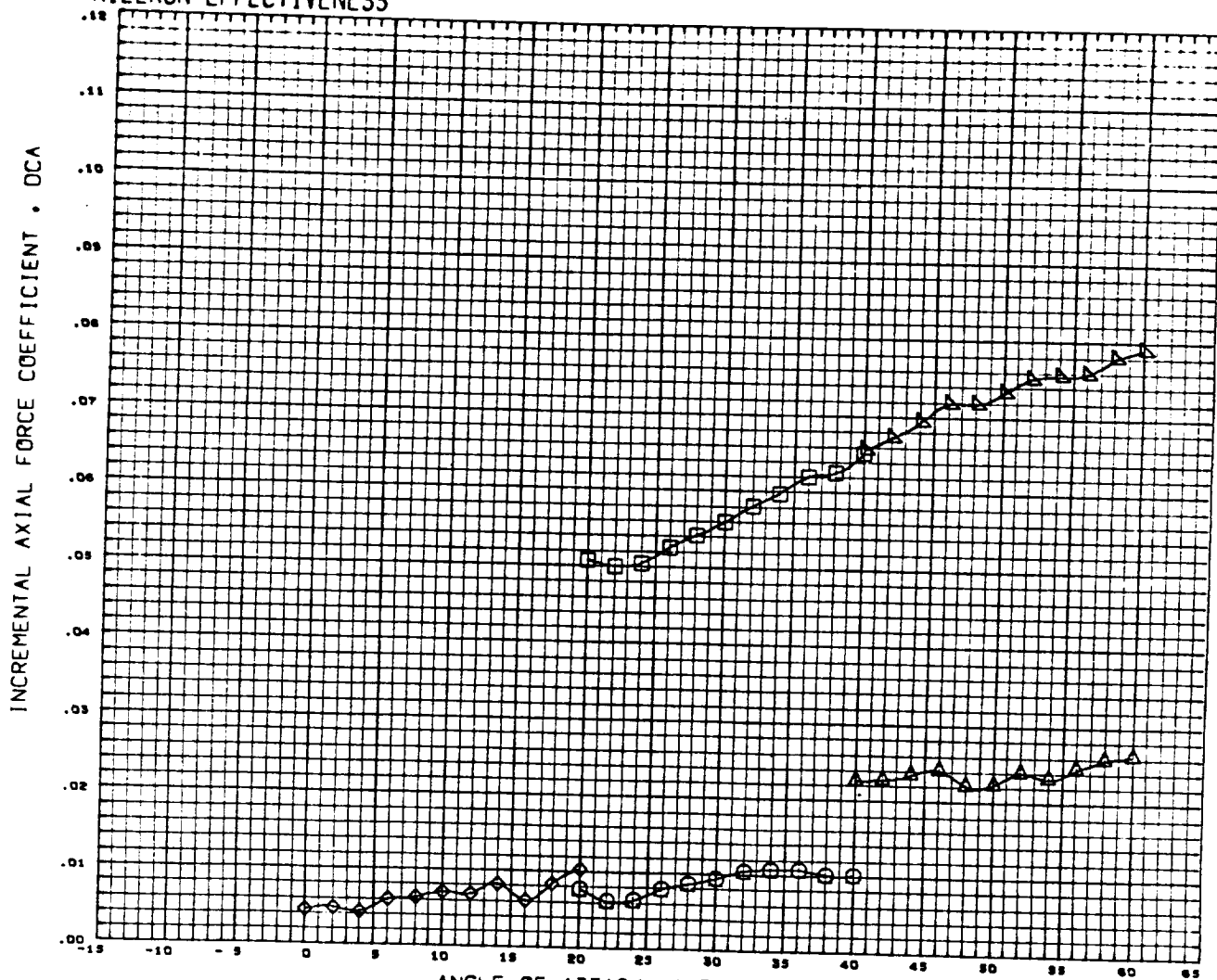
AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3610M)	M496-HSFC AR11961-3 MODEL W6B2V2	-30.000	0.000	-15.000	SREF 4.6225 sq.in.
(K3612K)	M496-HSFC AR11961-3 MODEL W6B2V2	0.000	0.000	0.000	LREF 1.5360 in.
(K3609A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF 4.3000 in.
(K3607H)	M496-HSFC AR11961-3 MODEL W6B2V2	30.000	0.000	15.000	XMRP 2.4000 in.
(K3607K)	M496-HSFC AR11961-3 MODEL W6B2V2	30.000	0.000	15.000	YMRP 0.0000 in.
					ZMRP 0.0000 in.
					SCALE 0.0025

MACH 1.200

AILERON EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(K3810M)	M496-HSFC	AR11981-3	MODEL	W682V2
(K3812K)	M496-HSFC	AR11981-3	MODEL	W682V2
(K3809A)	M496-HSFC	AR11981-3	MODEL	W682V2
(K3807M)	M496-HSFC	AR11981-3	MODEL	W682V2
(K3807K)	M496-HSFC	AR11981-3	MODEL	W682V2

MACH 1.960

ANGLE OF ATTACK, ALPHA, DEGREES

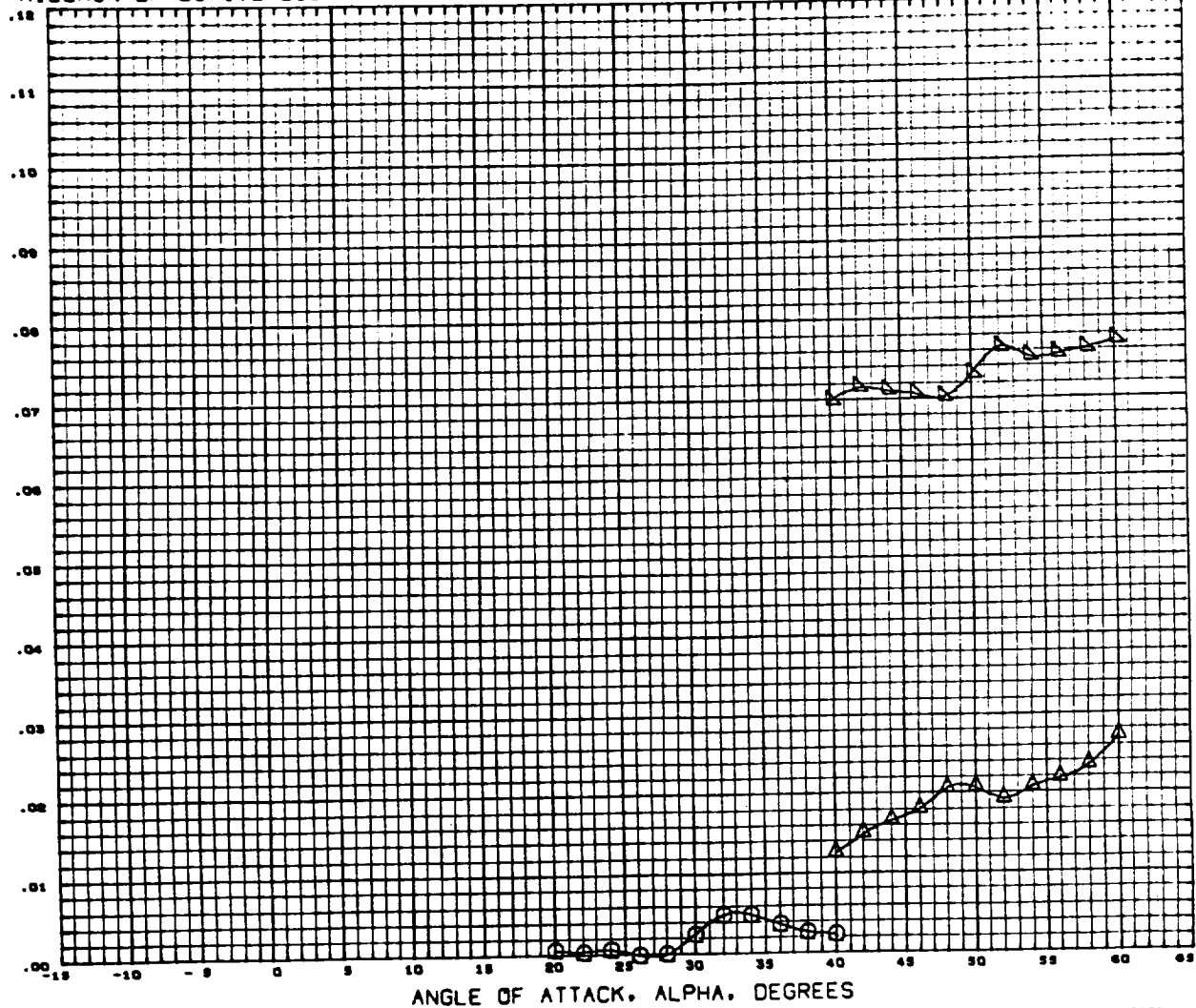
DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION

SREF	4.6225	80.1N.
LREF	1.5360	IN.
BREF	4.3000	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

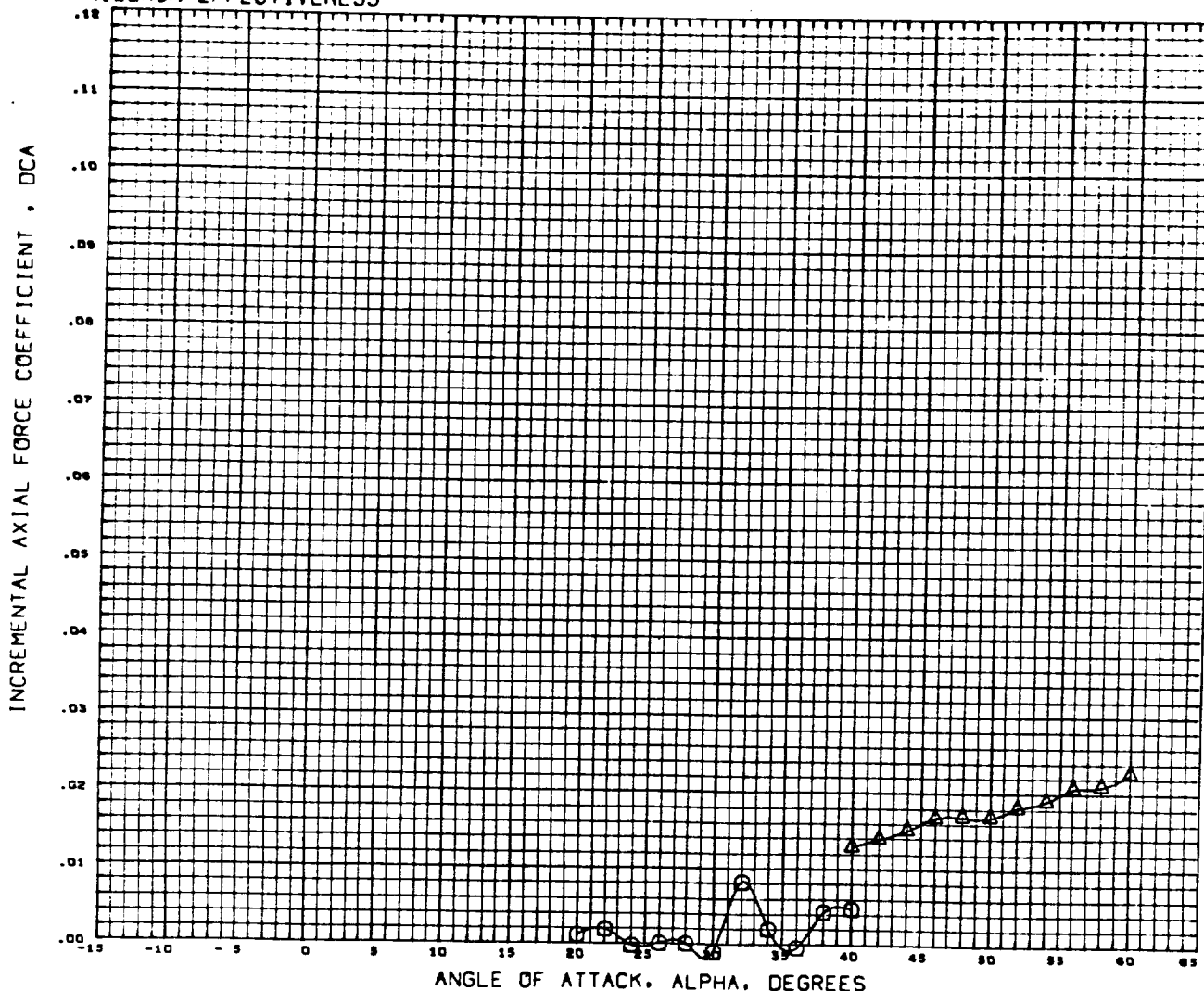
AILERON EFFECTIVENESS

INCREMENTAL AXIAL FORCE COEFFICIENT • DCA



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	ATLRON	REFERENCE INFORMATION	
(K3610M)	M496-HSFC AR11981-3 MODEL W8B2V2	-30.000	0.000	-15.000	SREF	4.6225 50. IN.
(K3612K)	M496-HSFC AR11981-3 MODEL W8B2V2	0.000	0.000	0.000	LREF	1.5363 IN.
(K3606A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF	4.3000 IN.
(K3607M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000	XMRP	2.4000 IN.
(K3607K)	M496-HSFC AR11981-3 MODEL W8B2V2	30.000	0.000	15.000	YMRP	0.0000 IN.
					ZMRP	0.0000 IN.
					SCALE	0.0025
MACH 3.500						

AILERON EFFECTIVENESS



DATA SET SYMBOL CONFIGURATION DESCRIPTION

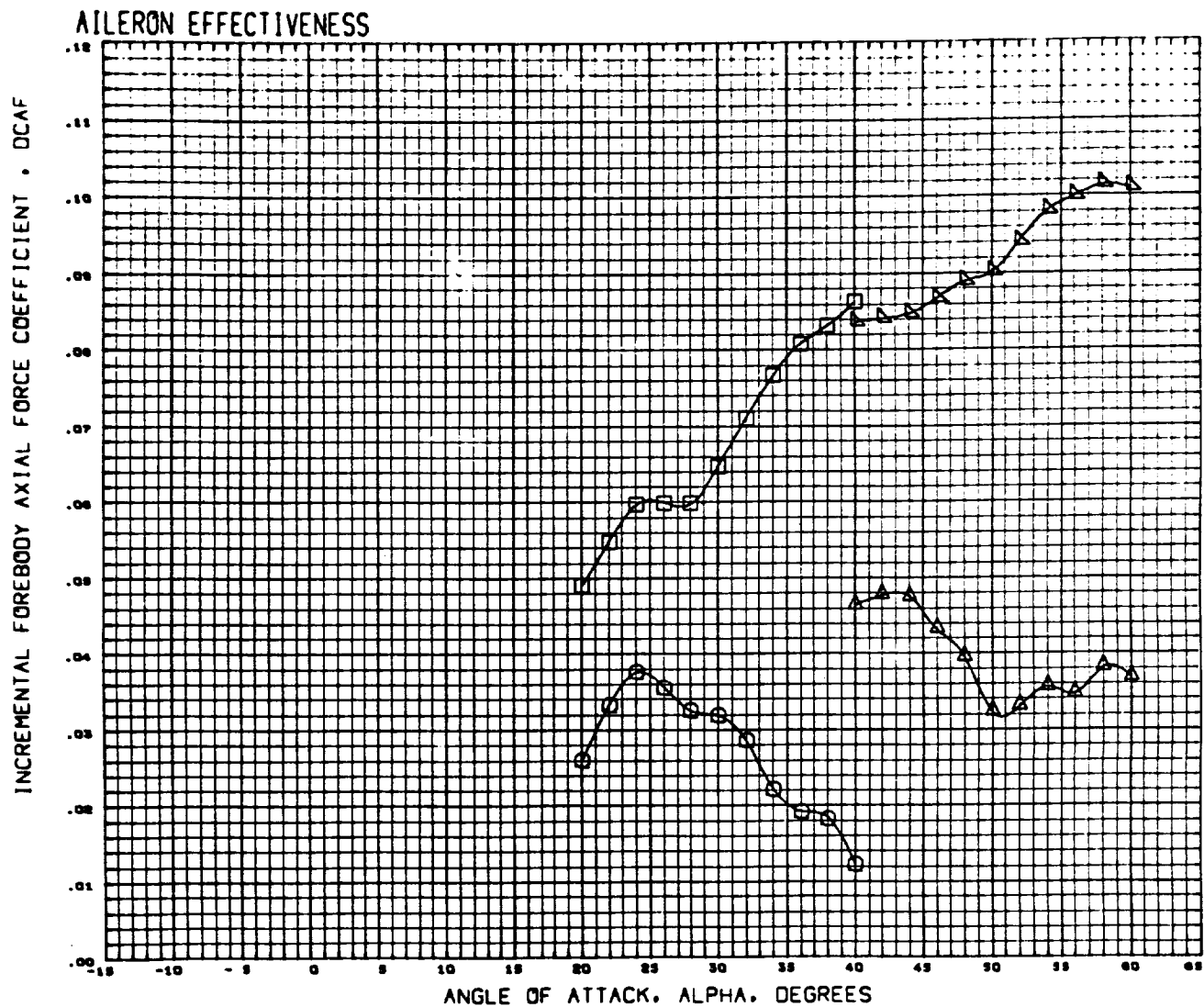
(K3810M) M496-MSFC AR1134-1-3 MODEL W6E2V2
 (K3812K) M496-MSFC AR1134-1-3 MODEL W6E2V2
 (K3805A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807K) DATA NOT AVAILABLE FOR ALL CONDITIONS

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION

SREF	4.6225	30. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

MACH 4.960

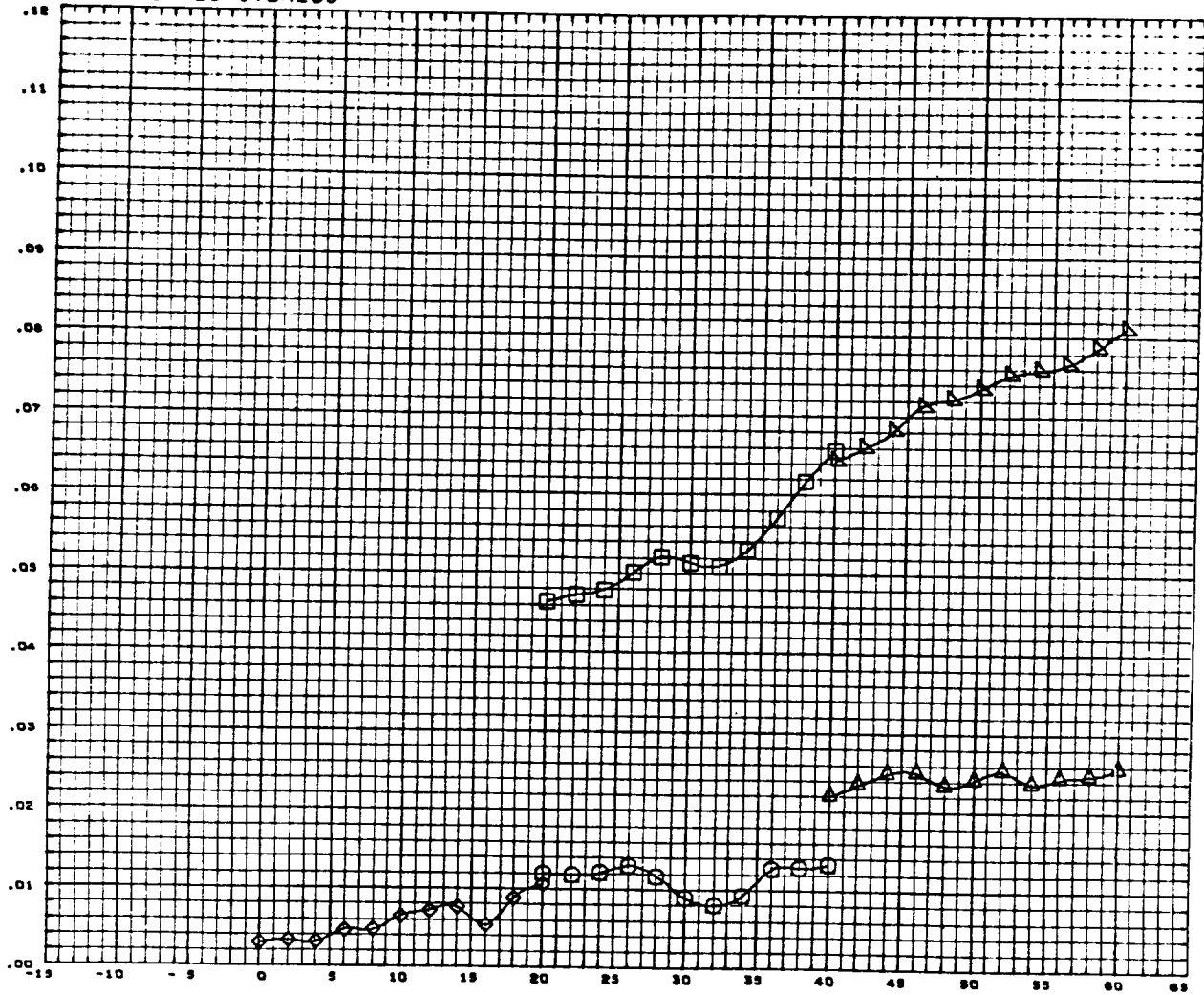


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION		
(K3810H)	M496-MSFC AR11981-3 MODEL W882V2	-30.000	0.000	-15.000	SREF	4.6225	30.1N.
(K3812H)	M496-MSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	LREF	1.3360	1N.
(K3808A)	DATA NOT AVAILABLE FOR ALL CONDITIONS				BREF	4.3000	1N.
(K3807H)	M496-MSFC AR11981-3 MODEL W882V2	30.000	0.000	15.000	YMFP	0.0000	1N.
(K3807K)	M496-MSFC AR11981-3 MODEL W882V2	30.000	0.000	15.000	ZMFP	0.0000	1N.
					SCALE	0.0025	

MACH 1.200

AILERON EFFECTIVENESS

INCREMENTAL FOREBODY AXIAL FORCE COEFFICIENT, ΔC_{AF}



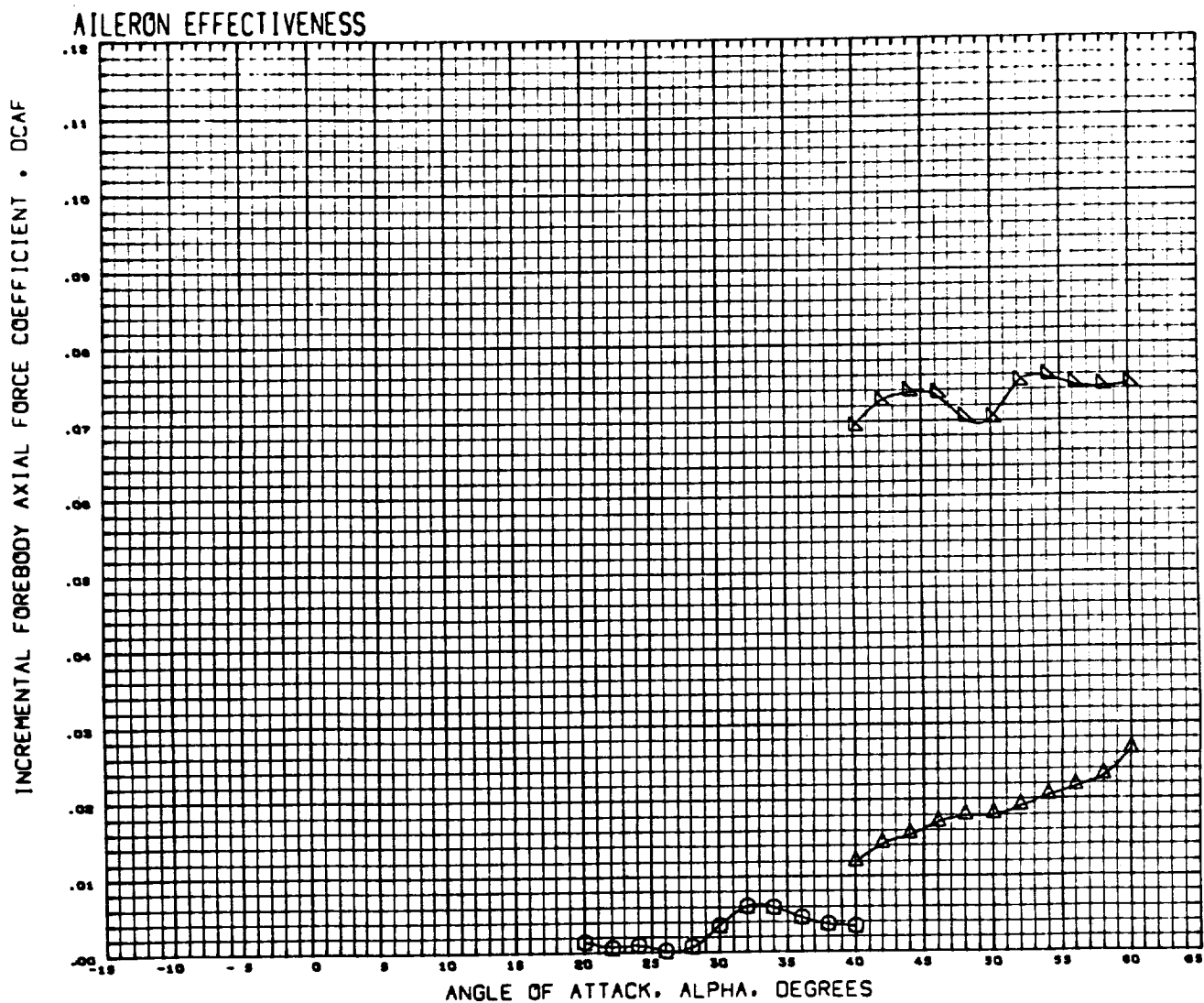
ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810H)	M496-MSFC AR11981-3 MODEL W682V2
(K3812K)	M496-MSFC AR11981-3 MODEL W682V2
(K3808A)	M496-MSFC AR11981-3 MODEL W682V2
(K3807H)	M496-MSFC AR11981-3 MODEL W682V2
(K3807K)	M496-MSFC AR11981-3 MODEL W682V2

MACH 1.960

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5380 IN.
BREF	4.3000 IN.
ZMRP	2.4000 IN.
ZMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

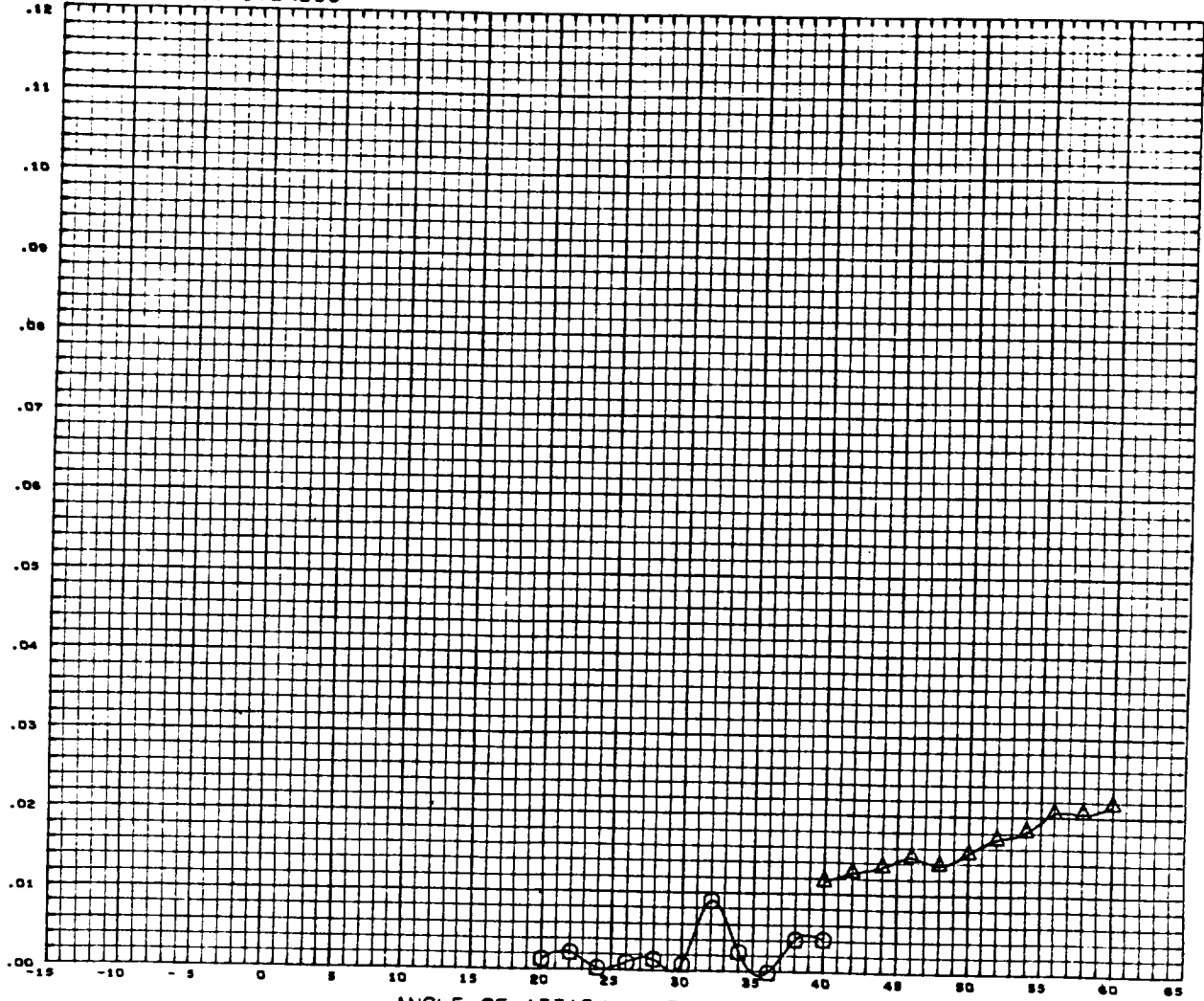


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3801R)	M496-NSFC AR11981-3 MODEL W682V2	-30.000	0.000	-15.000	SREF 4.6225 sq. in.
(K3801R)	M496-NSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	LREF 1.5360 in.
(K3806A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF 4.3000 in.
(K3807R)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000	XMRP 2.4000 in.
(K3807R)	M496-NSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	YMRP 0.0000 in.
					ZMRP 0.0000 in.
					SCALE 0.0025

MACH 3.500

AILERON EFFECTIVENESS

INCREMENTAL FOREBODY AXIAL FORCE COEFFICIENT, ΔC_{AF}



ANGLE OF ATTACK, ALPHA, DEGREES

DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (K3810M) M496-MSFC AR11981-3 MODEL W82V2
 (K3812K) M496-MSFC AR11981-3 MODEL W82V2
 (K3809A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807M) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807K) DATA NOT AVAILABLE FOR ALL CONDITIONS

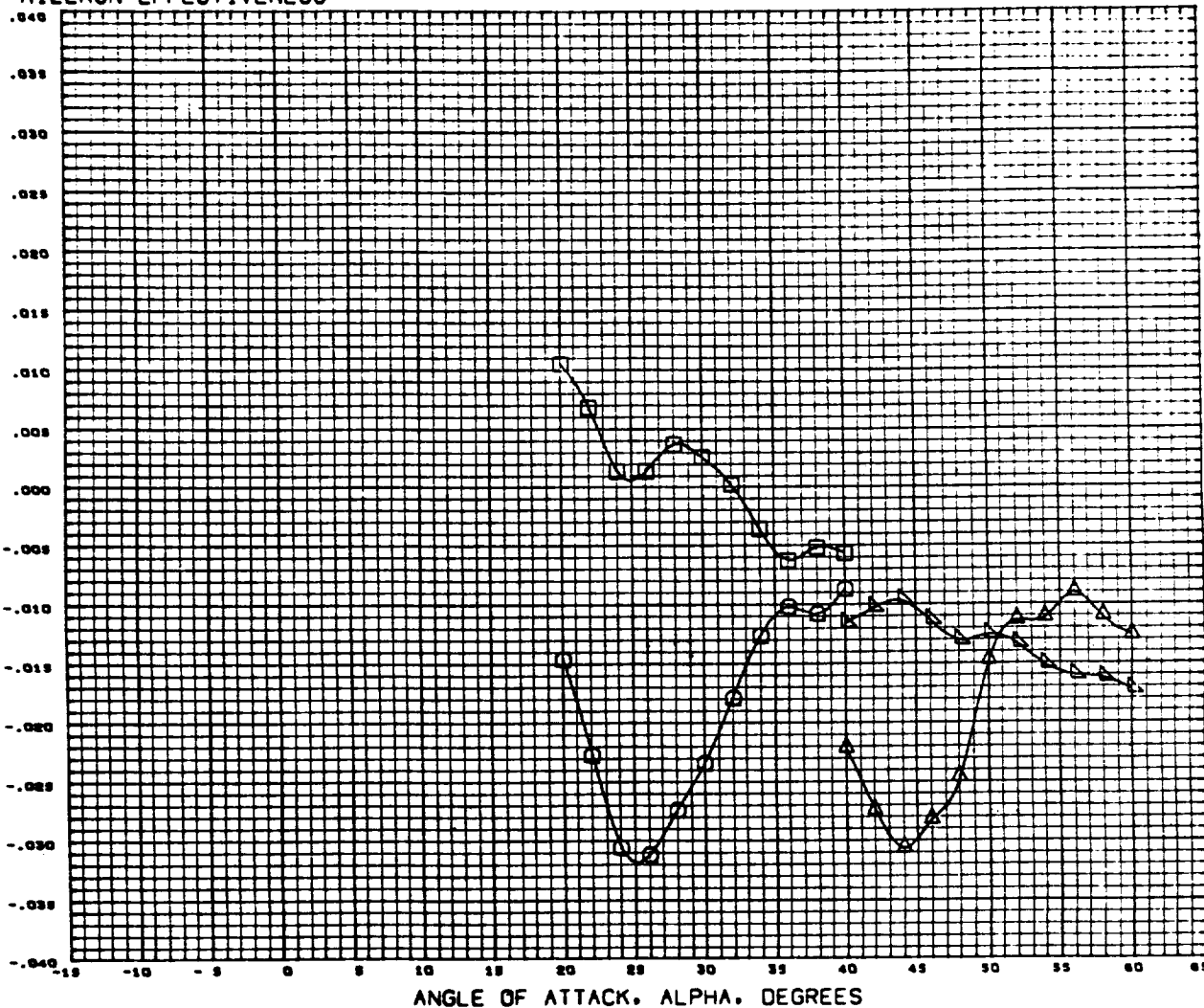
DEL	DER	AILRON
-30.000	0.000	-13.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 4.960

AILERON EFFECTIVENESS

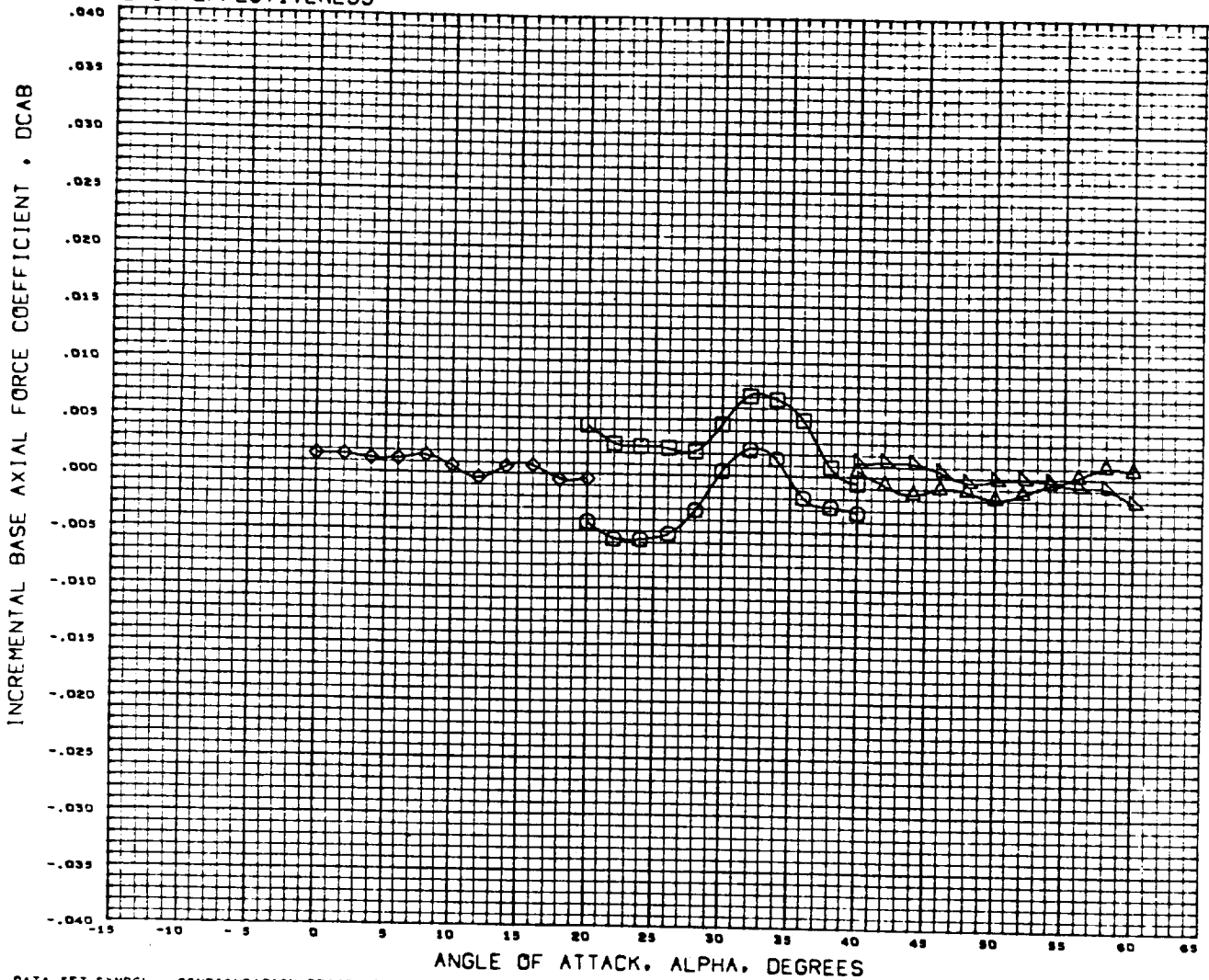
INCREMENTAL BASE AXIAL FORCE COEFFICIENT • DCAB



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3010M)	M496-HSFC AR11991-3 WGOEL W882V2	-30.000	0.000	-15.000	SREF 4.6225 50.1N.
(K3012K)	M496-HSFC AR11991-3 WGOEL W882V2	0.000	0.000	0.000	LREF 1.5580 1N.
(K3006A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	SREF 4.3000 1N.
(K3007M)	M496-HSFC AR11991-3 WGOEL W882V2	30.000	0.000	15.000	XMRP 2.4000 1N.
(K3007K)	M496-HSFC AR11991-3 WGOEL W882V2	30.000	0.000	15.000	YMRP 0.0000 1N.
					ZMRP 0.0000 1N.
					SCALE 0.0025

MACH 1.200

AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3910H)	M496-MSFC AR11991-3 MGOEL W622V2
(K3912K)	M496-MSFC AR11991-3 MGOEL W622V2
(K3909A)	M496-MSFC AR11991-3 MGOEL W622V2
(K3907H)	M496-MSFC AR11991-3 MGOEL W622V2
(K3907K)	M496-MSFC AR11991-3 MGOEL W622V2

MACH 1.960

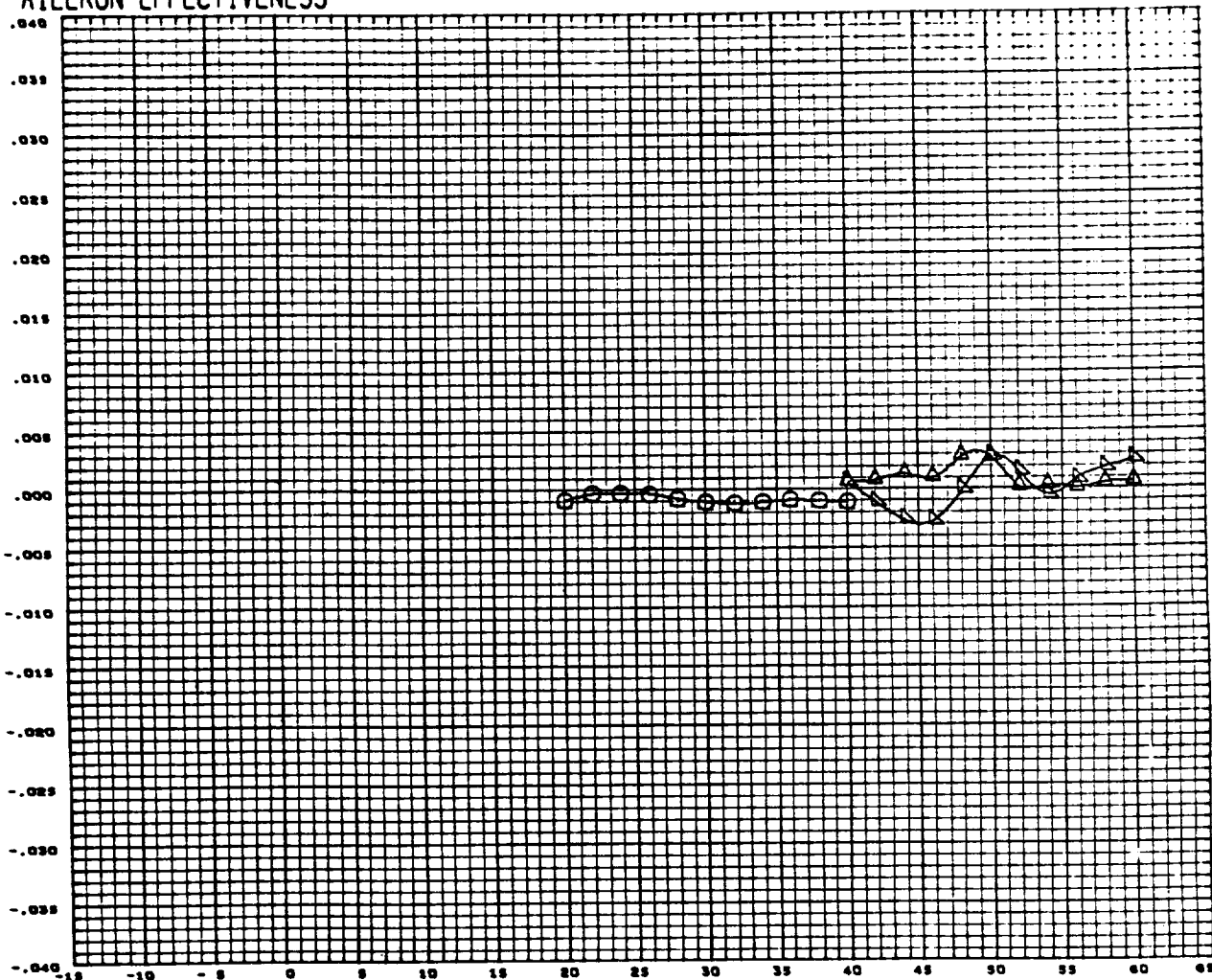
ANGLE OF ATTACK, ALPHA, DEGREES

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION		
SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

AILERON EFFECTIVENESS

INCREMENTAL BASE AXIAL FORCE COEFFICIENT • DCAB



ANGLE OF ATTACK, ALPHA, DEGREES

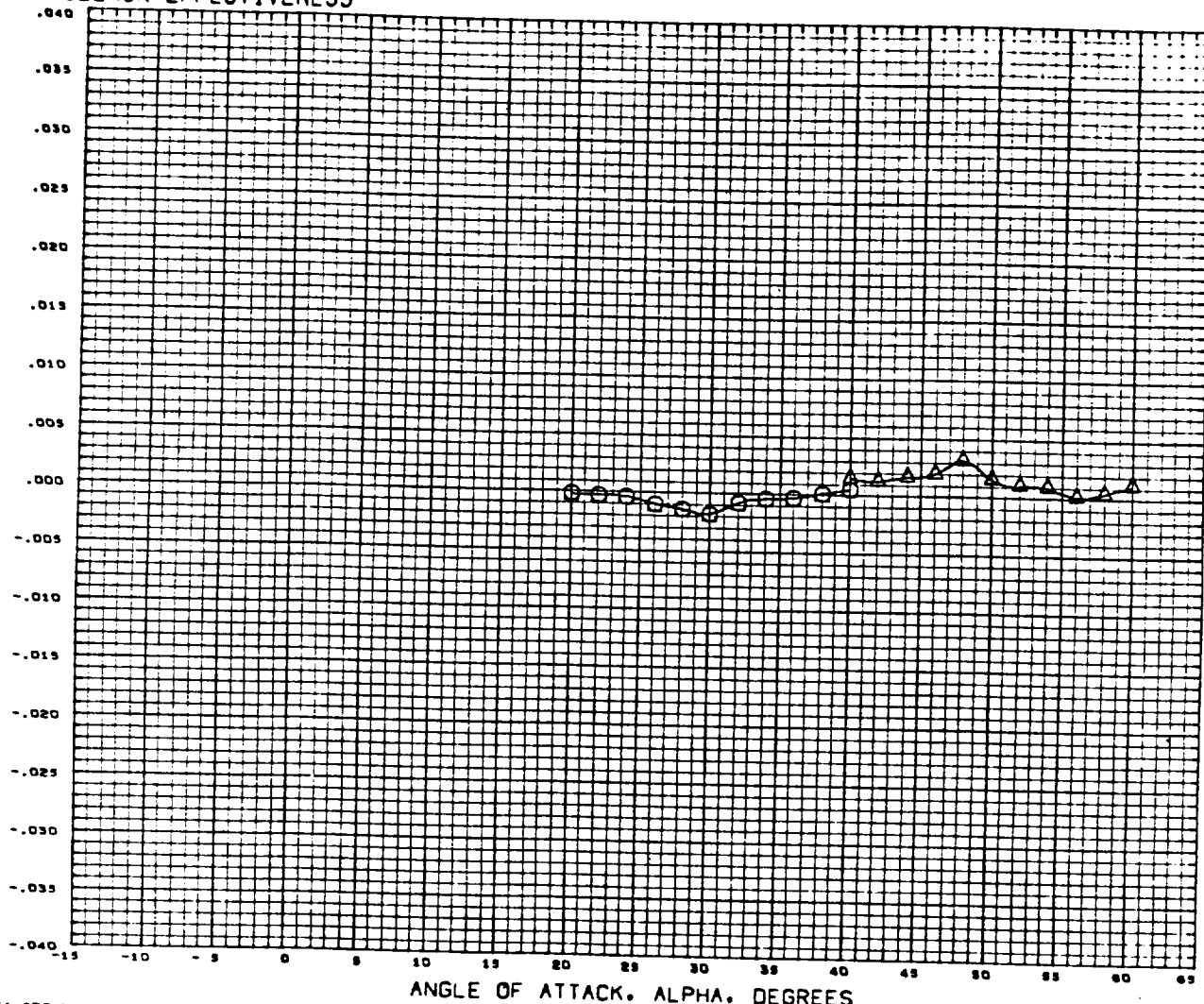
DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON
(K3410H)	M496-HSPC AR11991-3 MODEL W682V2	-30.000	0.000	-15.000
(K3412K)	M496-HSPC AR11991-3 MODEL W682V2	0.000	0.000	0.000
(K3409A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000
(K3407H)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000
(K3407K)	M496-HSPC AR11991-3 MODEL W682V2	30.000	0.000	15.000

MACH 3.500

REFERENCE INFORMATION	
SREF	4.6225 30. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
XHRP	2.4000 IN.
YHRP	0.0000 IN.
ZHRP	0.0000 IN.
SCALE	0.0025

AILERON EFFECTIVENESS

INCREMENTAL BASE AXIAL FORCE COEFFICIENT, DCAB



ANGLE OF ATTACK, ALPHA, DEGREES

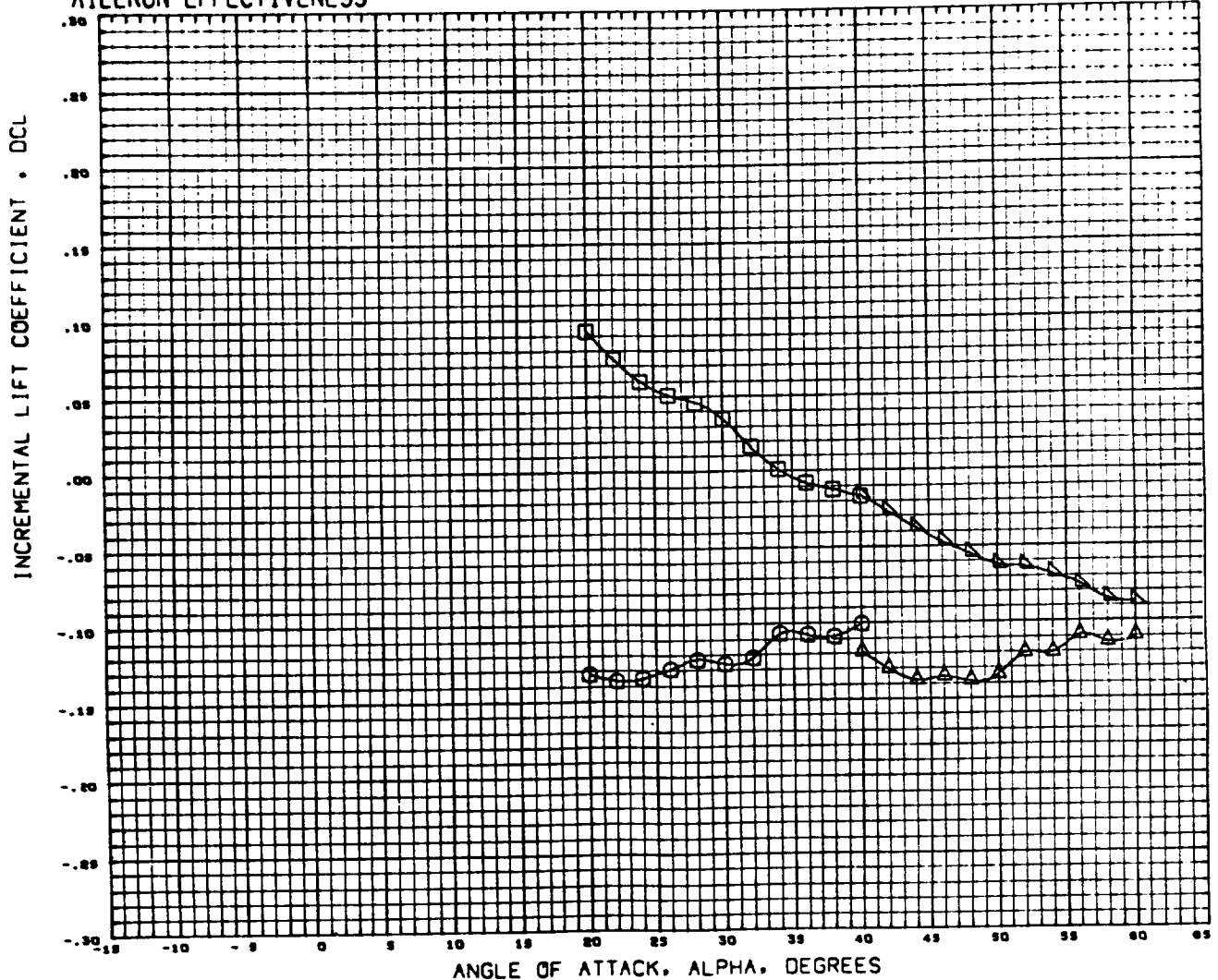
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (K3910M) M496-MSFC AR11981-3 MODEL W622V2
 (K3912K) M496-MSFC AR11981-3 MODEL W622V2
 (K3909A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3907H) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3907K) DATA NOT AVAILABLE FOR ALL CONDITIONS

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000

REFERENCE INFORMATION
 SREF 4.6225 30. IN.
 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

MACH 4.980

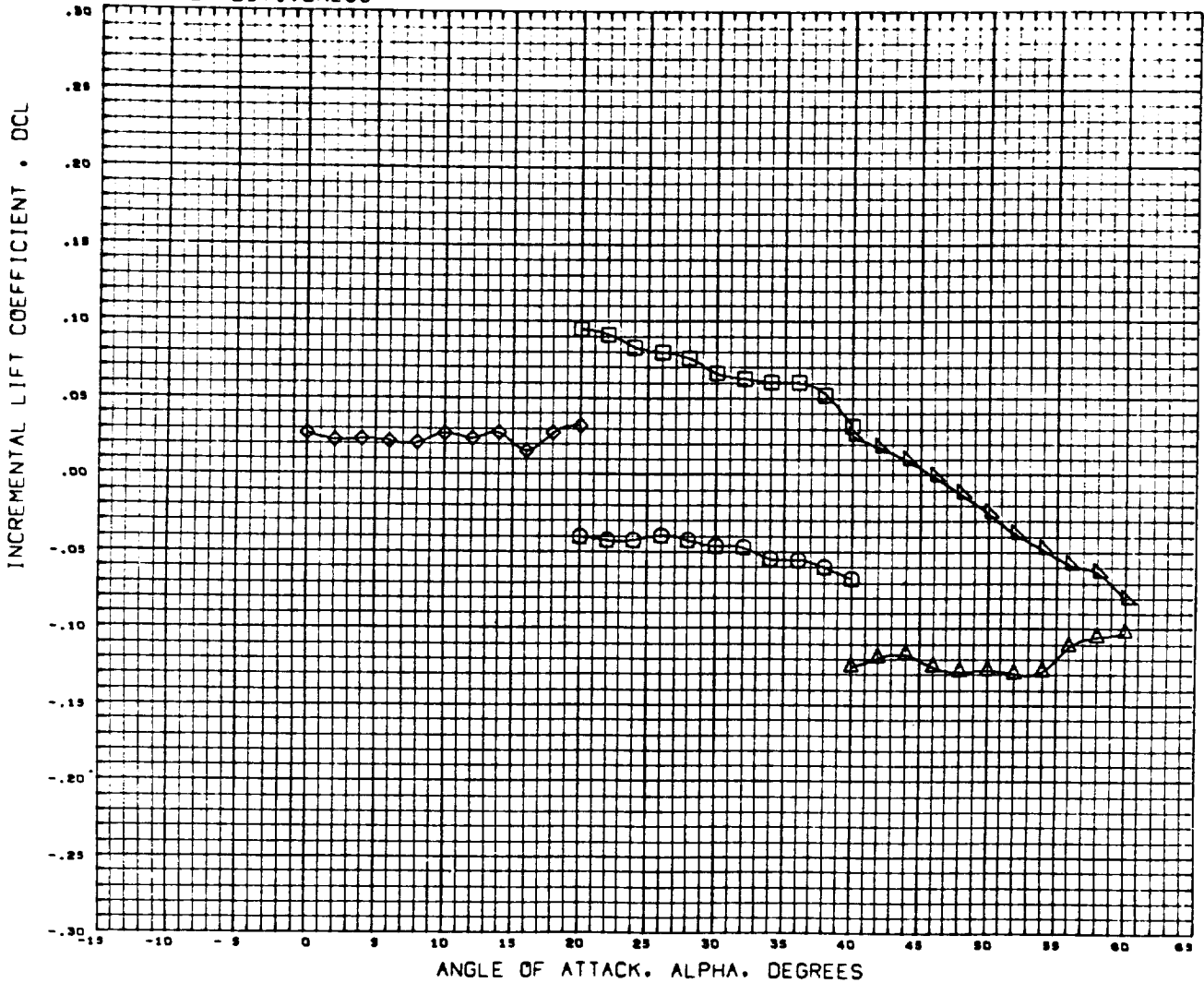
AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3610M)	M496-HSFC AR11981-3 MODEL W682V2	-30.000	0.000	-15.000	SREF 4.6225 SQ. IN.
(K3612K)	M496-HSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	LREF 1.3360 IN.
(K3609A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF 4.3000 IN.
(K3607H)	M496-HSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	XMRP 2.4000 IN.
(K3607K)	M496-HSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.200

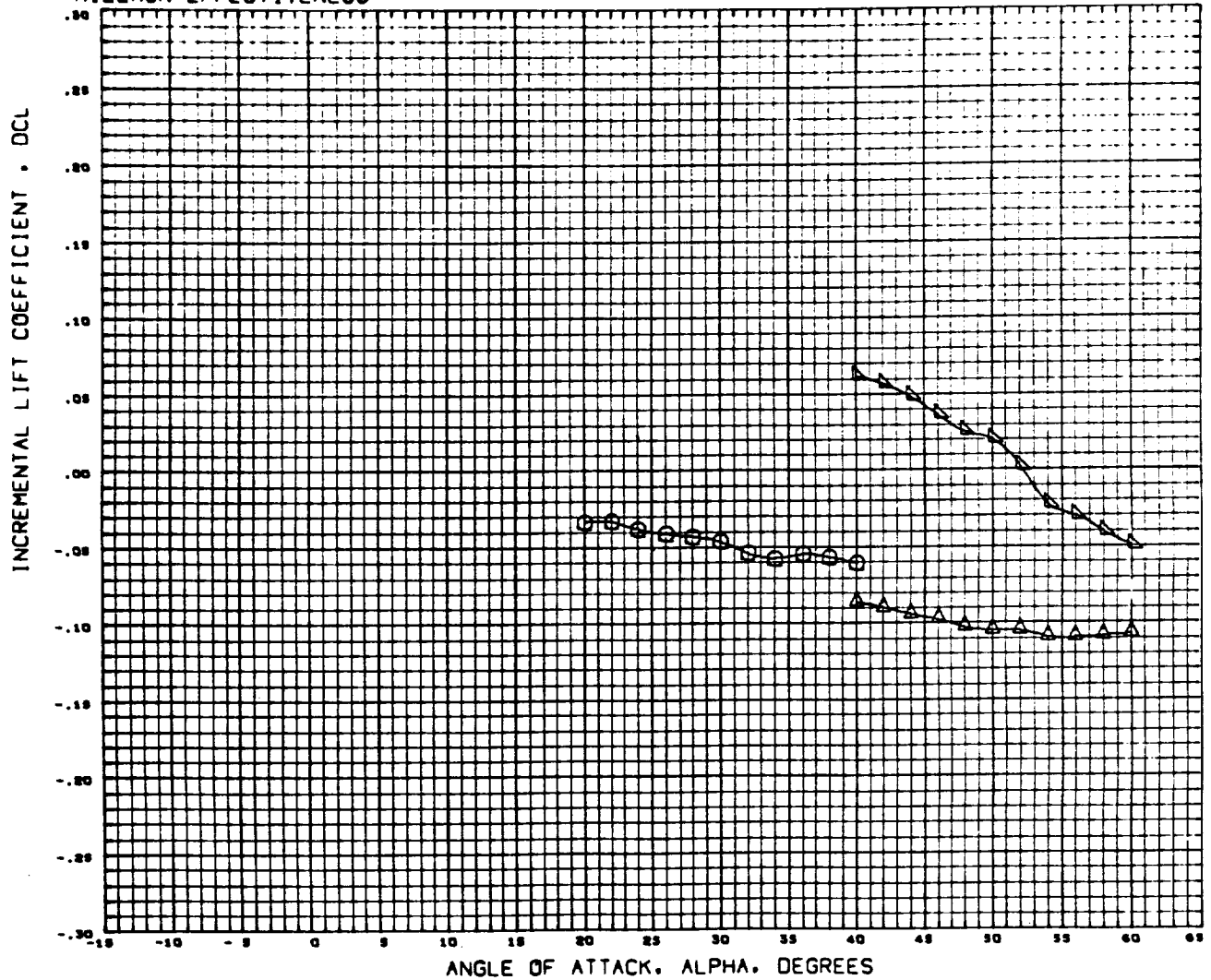
AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3810M)	M496-MSFC AR11981-3 MODEL W6B2V2	-30.000	0.000	-15.000	SREF 4.6225 SQ. IN.
(K3812K)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	0.000	0.000	LREF 1.5360 IN.
(K3809A)	M496-MSFC AR11981-3 MODEL W6B2V2	10.000	0.000	5.000	BREF 4.3000 IN.
(K3807M)	M496-MSFC AR11981-3 MODEL W6B2V2	30.000	0.000	15.000	XMRP 2.4000 IN.
(K3907K)	M496-MSFC AR11991-3 MODEL W6B2V2	30.000	0.000	15.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.060

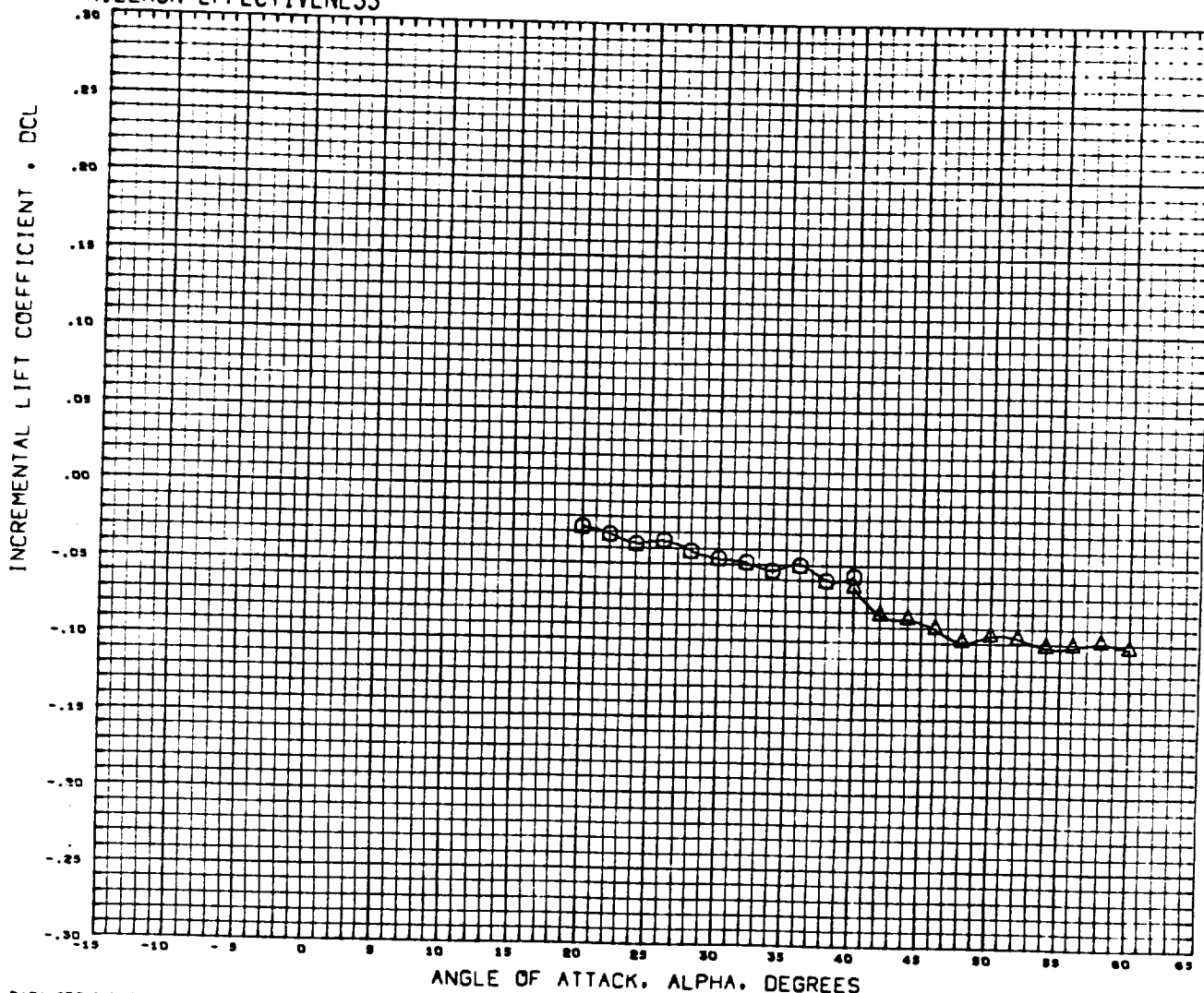
AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3810M)	M498-NSFC AR11981-3 MODEL W682V2	-30.000	0.000	-15.000	SREF 4.6225 SQ. IN.
(K3812R)	M498-NSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	LREF 1.5360 IN.
(K3908A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF 4.3000 IN.
(K3907M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000	XMRP 2.4000 IN.
(K3807K)	M498-NSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 3.500

AILERON EFFECTIVENESS

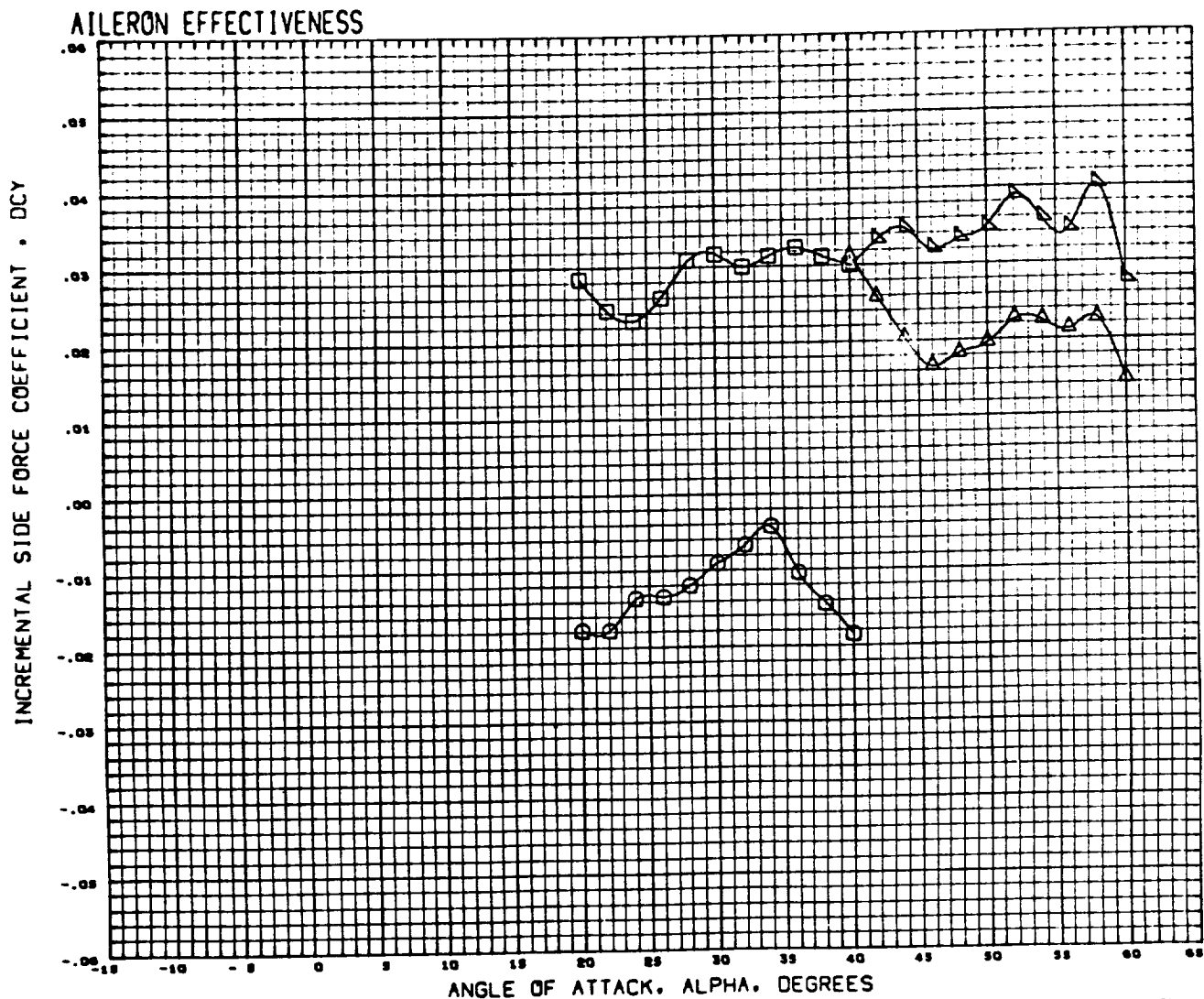


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (K3810M) M496-MSFC AR11981-3 MODEL W682V2
 (K3812K) M496-MSFC AR11981-3 MODEL W682V2
 (K3805A) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807M) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (K3807K) DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 4.960

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	8.000
30.000	0.000	15.000
30.000	0.000	15.000

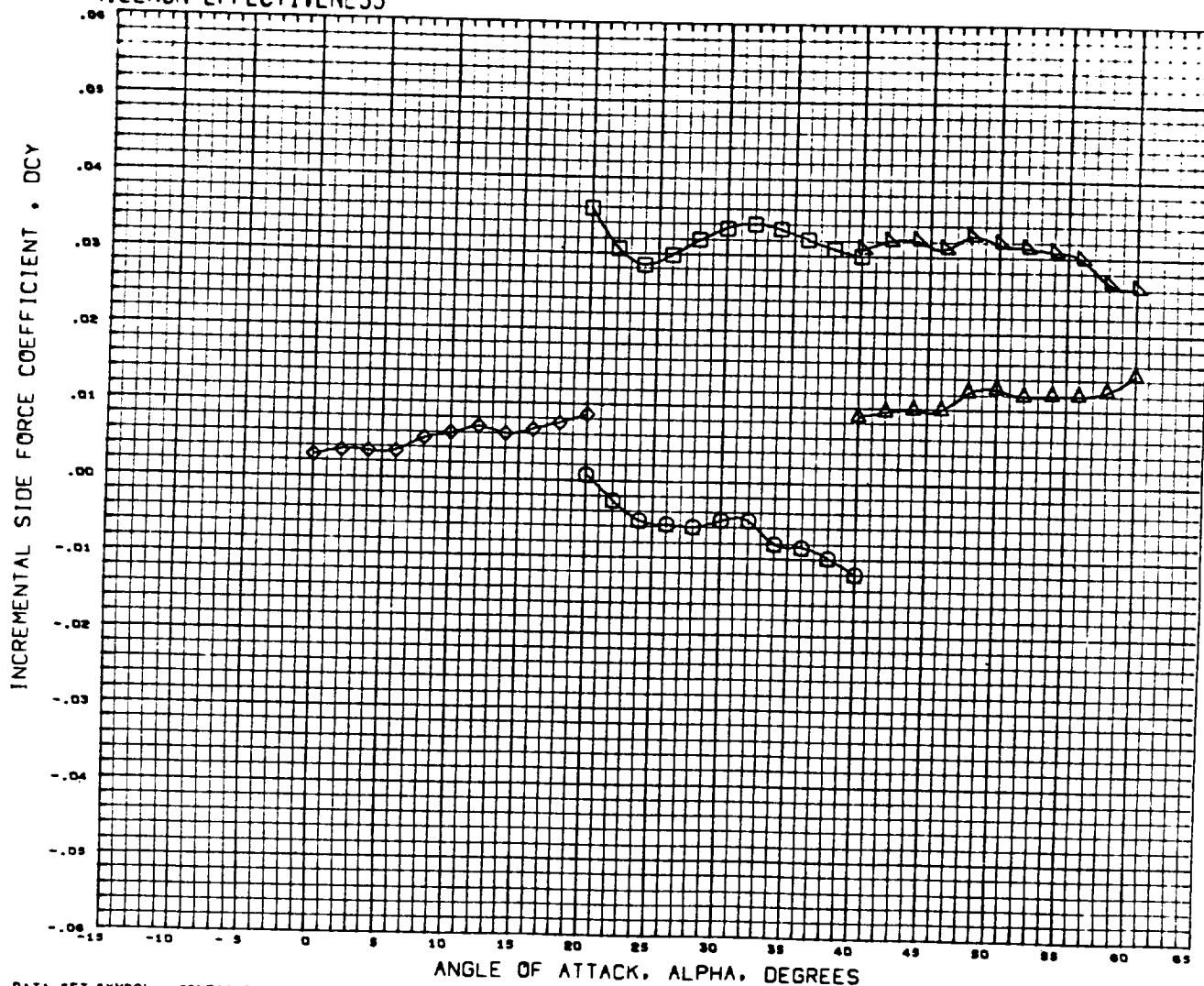
REFERENCE INFORMATION
 SREF 4.6225 50. IN.
 LREF 1.5360 IN.
 SREF 4.3000 IN.
 YMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0023



DATA SET SYMBOL				CONFIGURATION DESCRIPTION			DEL			DER			AILRON			REFERENCE INFORMATION	
(K3610M)	OROE	N496-MSPC	AR11901-3	MODEL	W682V2		-30.000	0.000	-15.000							SREF	4.6225 SQ. IN.
(K3612K)		N496-MSPC	AR11901-3	MODEL	W682V2		0.000	0.000	0.000							LREF	1.5360 IN.
(K3609A)		DATA NOT AVAILABLE FOR ALL CONDITIONS					10.000	0.000	5.000							BREF	4.3000 IN.
(K3607M)	OROE	N496-MSPC	AR11901-3	MODEL	W682V2		30.000	0.000	15.000							XMRP	2.4000 IN.
(K3607K)		N496-MSPC	AR11901-3	MODEL	W682V2		30.000	0.000	15.000							YMRP	0.0000 IN.
																ZMRP	0.0000 IN.
																SCALE	0.0025

MACH 1.200

AILERON EFFECTIVENESS

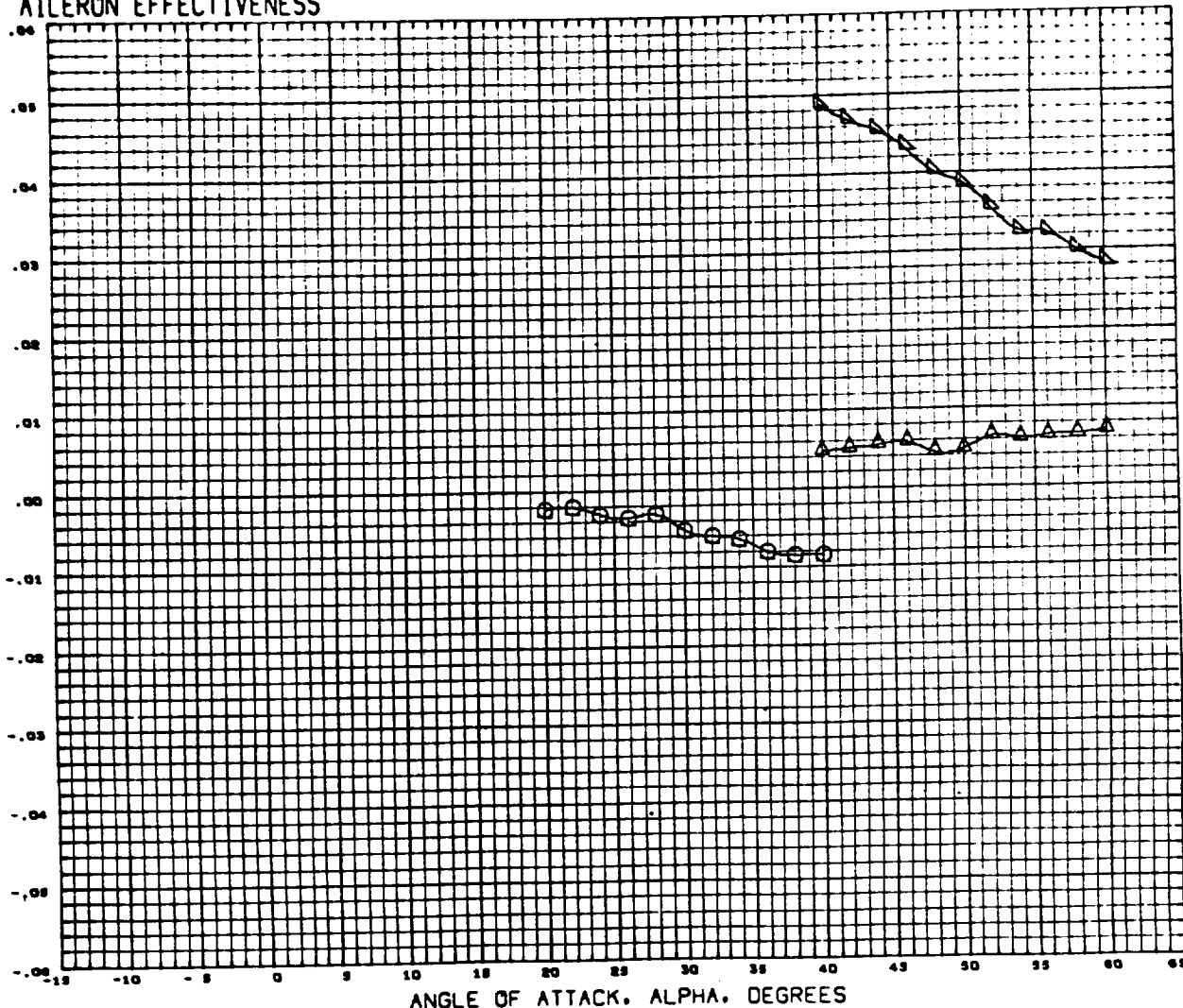


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3810M)	M496-MSFC AR11981-3 MODEL W682V2	-30.000	0.000	-15.000	SREF 4.6225 SQ. IN.
(K3812K)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	LREF 1.5360 IN.
(K3809A)	M496-MSFC AR11981-3 MODEL W682V2	10.000	0.000	5.000	SREF 4.3000 IN.
(K3807H)	M496-MSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	XMRP 2.4000 IN.
(K3807K)	M496-MSFC AR11981-3 MODEL W682V2	30.000	0.000	15.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 1.980

AILERON EFFECTIVENESS

INCREMENTAL SIDE FORCE COEFFICIENT • DCY

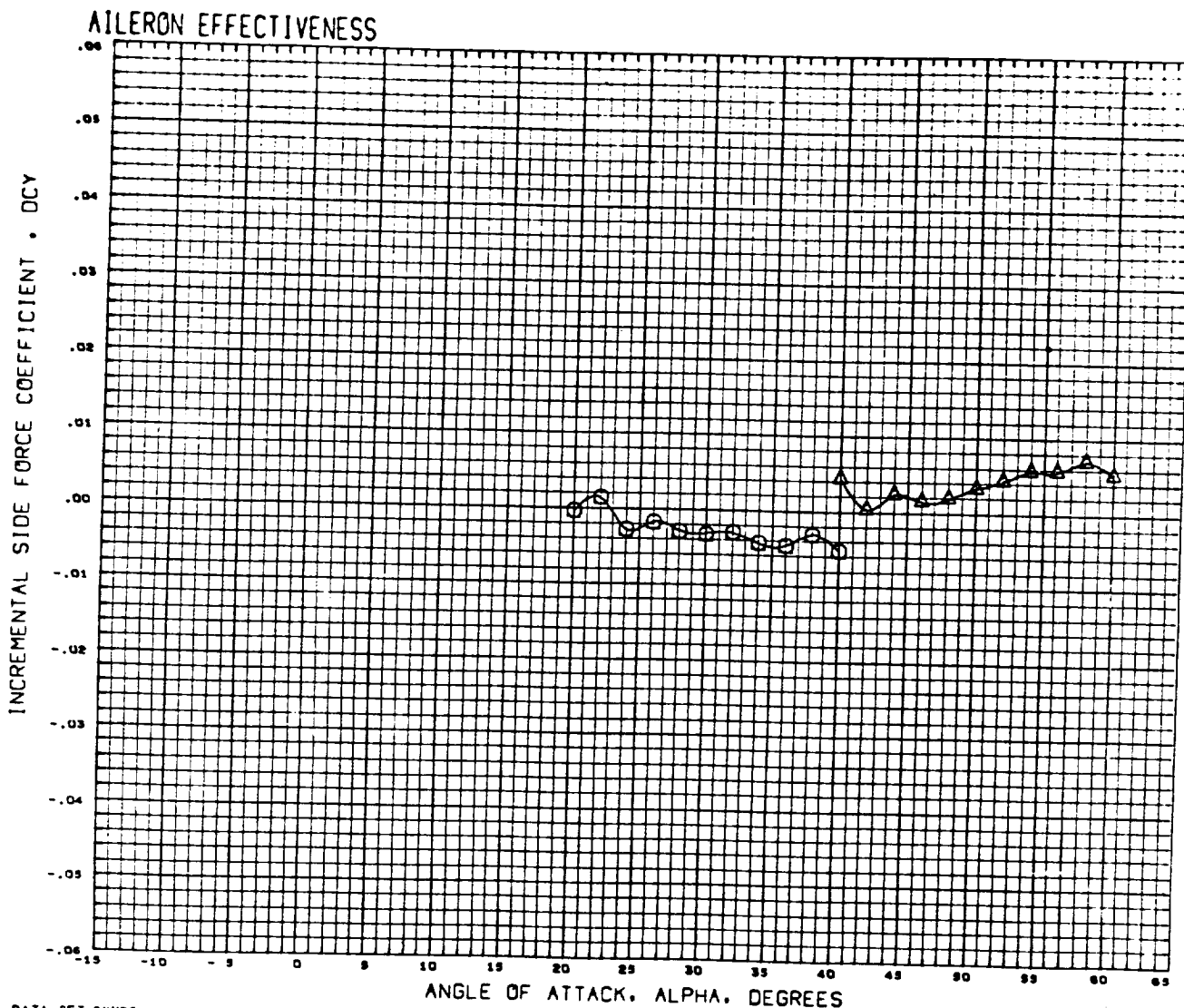


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810M)	M496-HSPC AR11961-3 MODEL W882V2
(K3812K)	M496-HSPC AR11961-3 MODEL W882V2
(K3808A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807M)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807K)	M496-HSPC AR11961-3 MODEL W882V2

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000

REFERENCE INFORMATION.	
SREF	4.6225 SQ. IN.
LREF	1.3560 IN.
SREF	4.3000 IN.
YMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

MACH 3.500

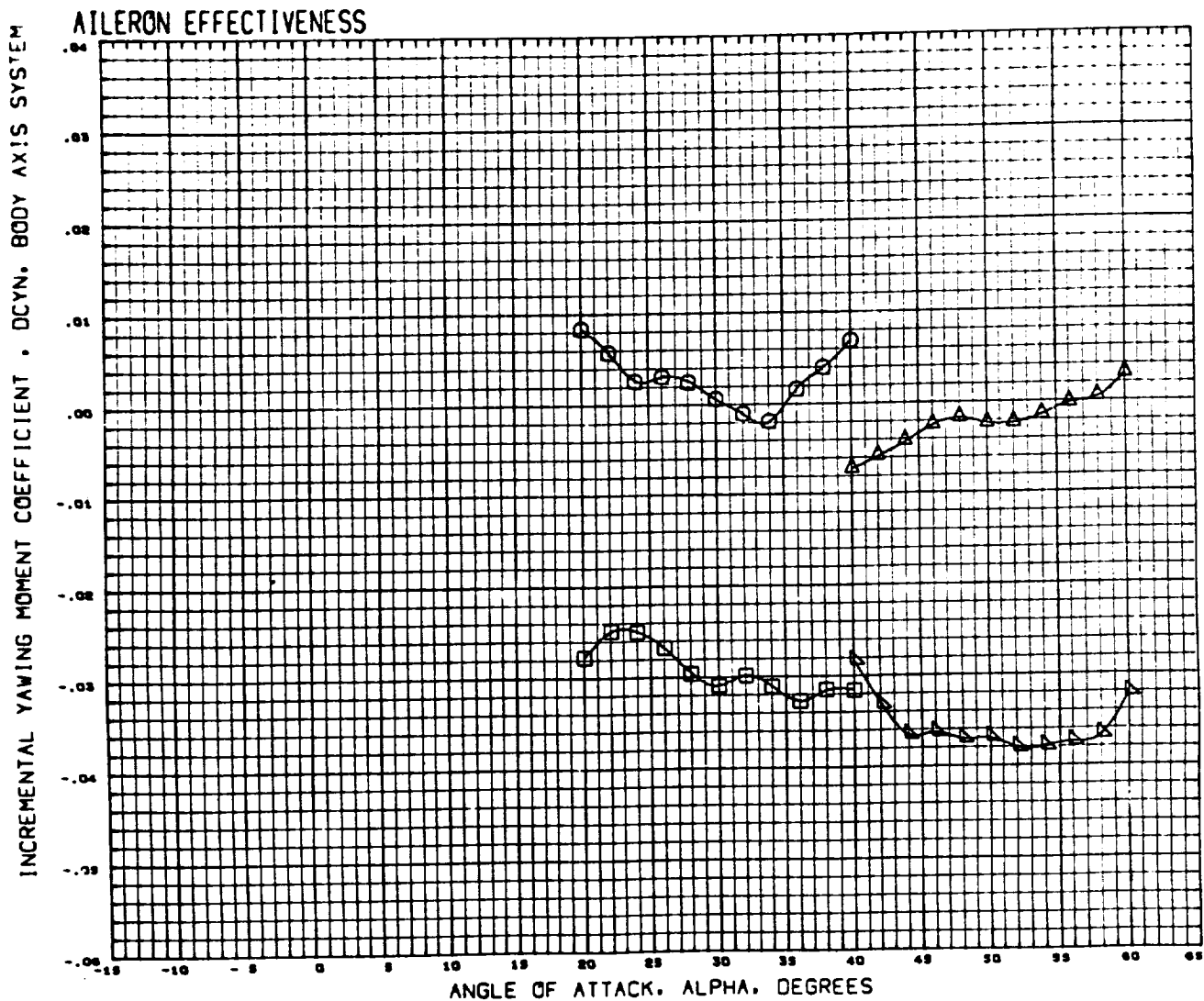


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810H)	M496-HSFC AR11981-3 MODEL W62V2
(K3812K)	M496-HSFC AR11981-3 MODEL W62V2
(K3809A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807K)	DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 4.960

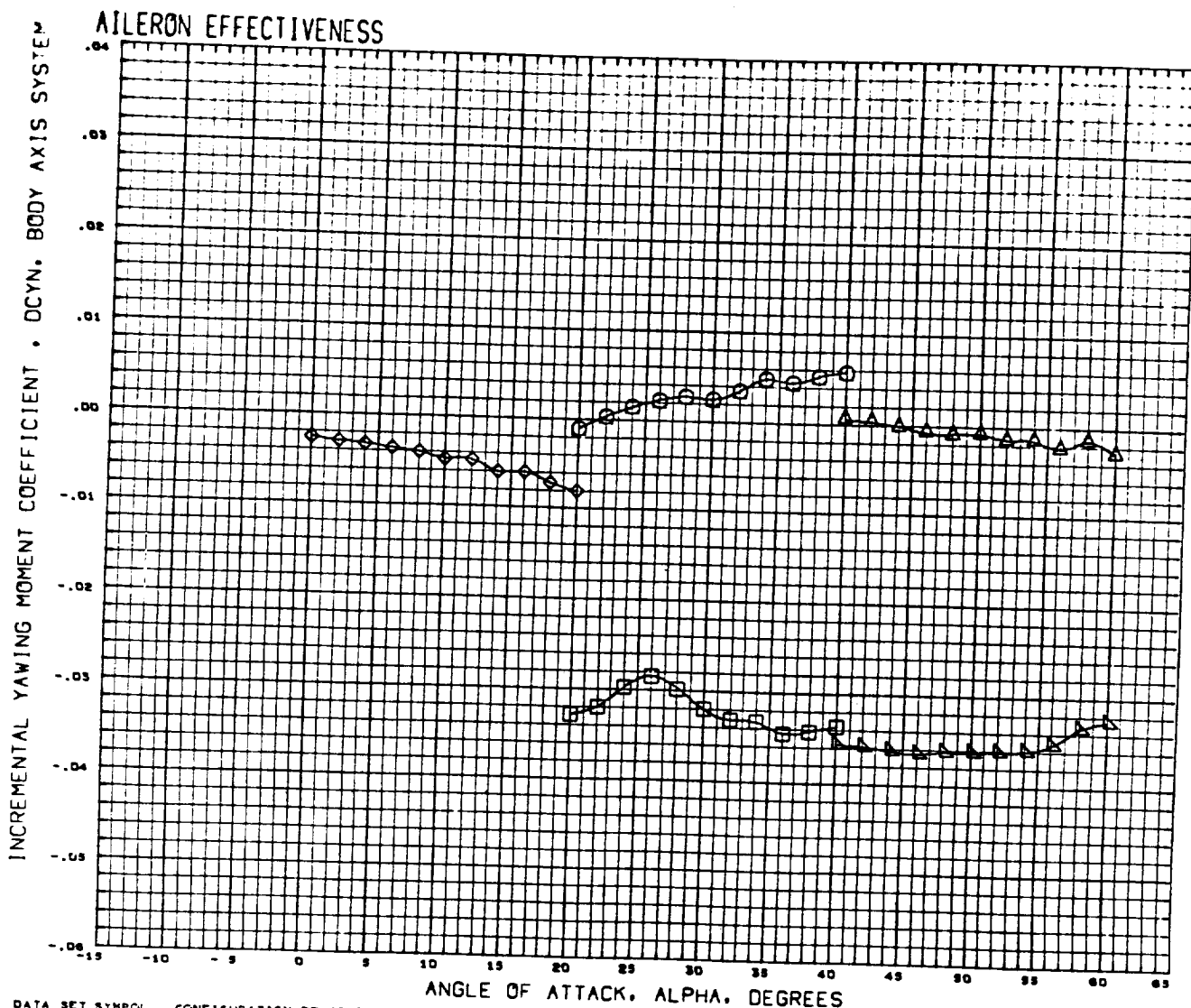
DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.5360 IN.
BREF	4.3000 IN.
YMRP	2.4000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION	
(K3810M)	M496-MSFC AR11981-3 MODEL W682V2	-30.000	0.000	-13.000	SREP	4.6225 SQ. IN.
(K3812R)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	LREP	1.3340 IN.
(K3806A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREP	4.3000 IN.
(K3807M)	M496-MSFC AR11981-3 MODEL W682V2	30.000	0.000	13.000	YMRP	2.4000 IN.
(K3807K)	M496-MSFC AR11981-3 MODEL W682V2	30.000	0.000	13.000	YMRP	0.0000 IN.
					ZMRP	0.0000 IN.
					SCALE	0.0025

MACH 1.200



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810H)	M496-MSFC AR11981-3 MODEL W882V2
(K3812K)	M496-MSFC AR11981-3 MODEL W882V2
(K3809A)	M496-MSFC AR11981-3 MODEL W882V2
(K3807H)	M496-MSFC AR11981-3 MODEL W882V2
(K3807K)	M496-MSFC AR11981-3 MODEL W882V2

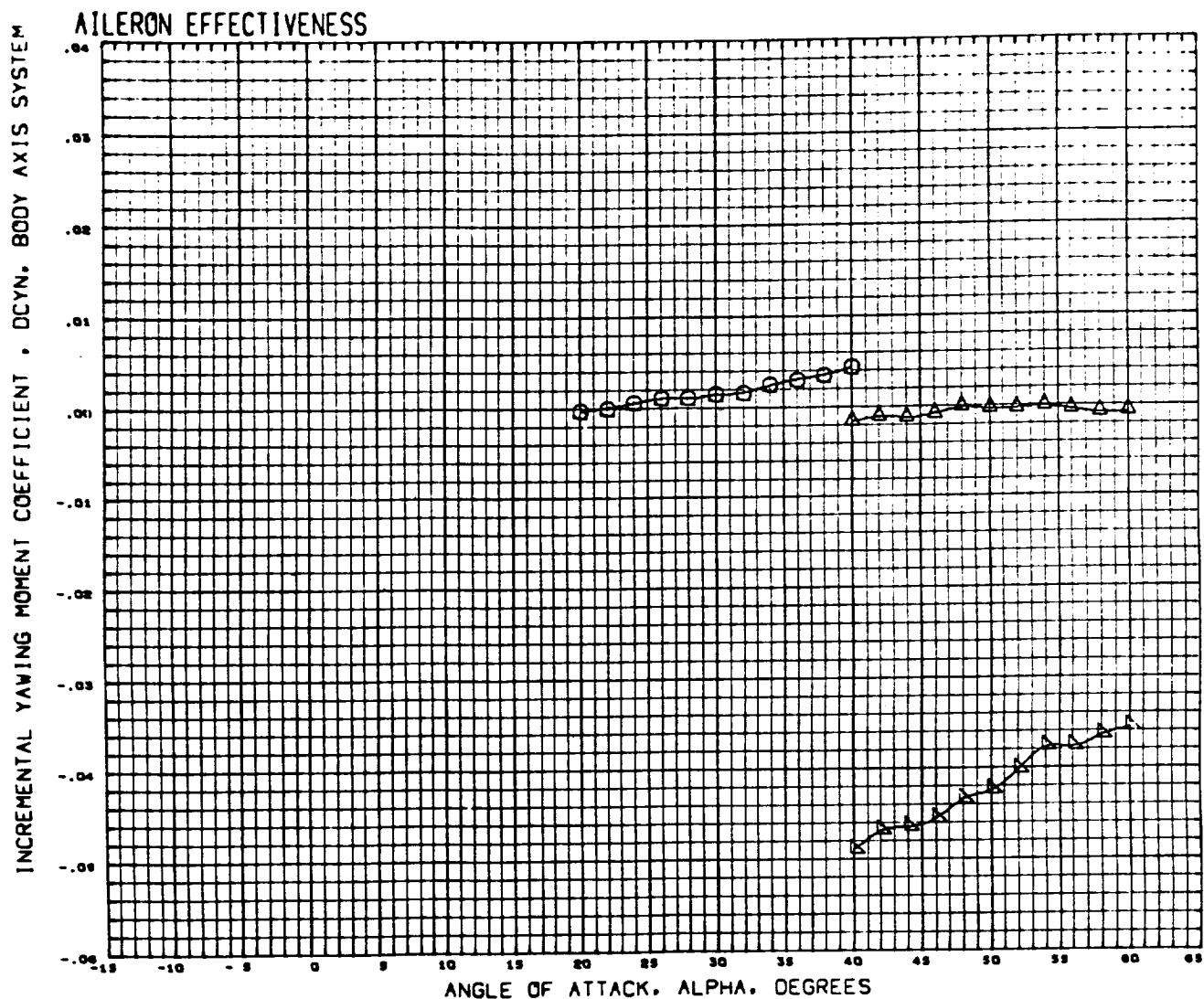
MACH 1.960

ANGLE OF ATTACK, ALPHA, DEGREES

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000
30.000	0.000	15.000

REFERENCE INFORMATION

SREF	4.6225	50. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
YMRP	2.4000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

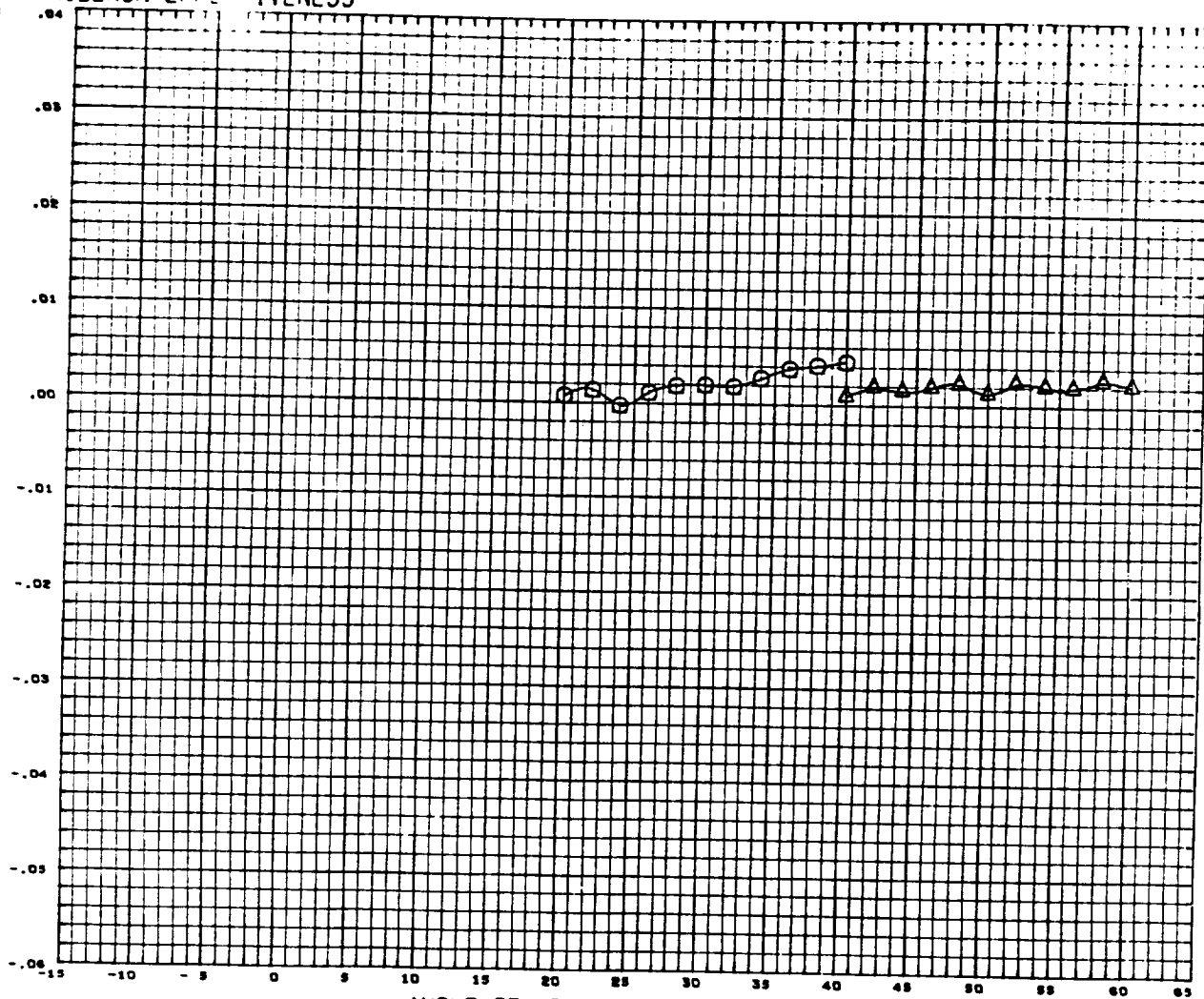


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3810M)	M496-MSPC AR11961-3 MODEL W682V2	-30.000	0.000	-15.000	SREF 4.6225 50. IN.
(K3812K)	M496-MSPC AR11961-3 MODEL W682V2	0.000	0.000	0.000	LREF 1.5360 IN.
(K3806A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREF 4.3000 IN.
(K3807M)	DATA NOT AVAILABLE FOR ALL CONDITIONS	30.000	0.000	15.000	XMRP 2.4000 IN.
(K3807K)	M496-MSPC AR11961-3 MODEL W682V2	30.000	0.000	15.000	YMRP 0.0000 IN.
					ZMRP 0.0000 IN.
					SCALE 0.0025

MACH 3.900

INCREMENTAL YAWING MOMENT COEFFICIENT, DCYN. BODY AXIS SYSTEM

AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810M)	M496-MSFC AR11981-3 MODEL W682V2
(K3812K)	M496-MSFC AR11981-3 MODEL W682V2
(K3805A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807K)	DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 4.960

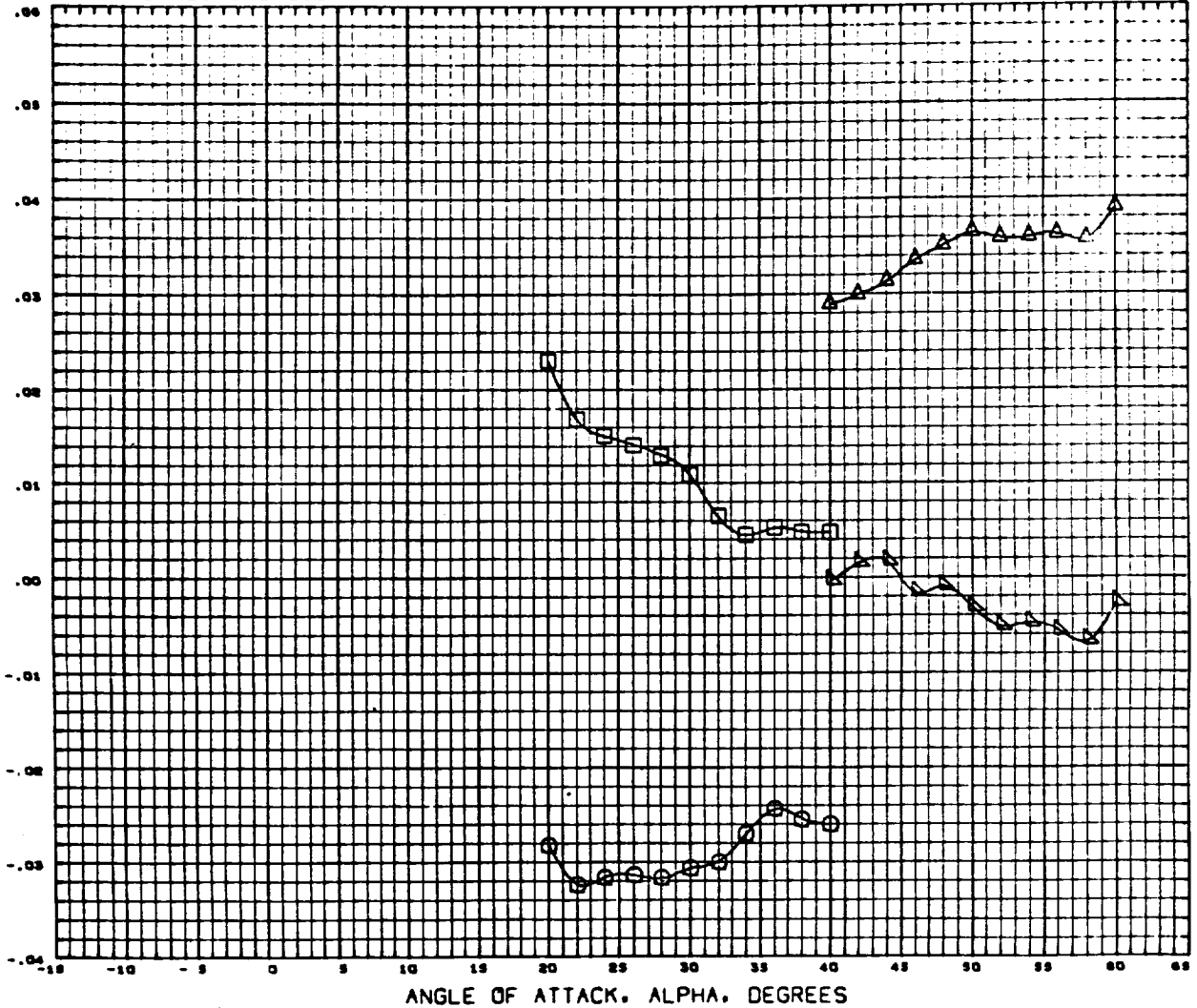
ANGLE OF ATTACK, ALPHA, DEGREES

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 SQ. IN.
LREF	1.3360 IN.
BREF	4.3000 IN.
XMRP	2.4000 IN.
YMRP	0.0000 IN.
ZMRP	0.0000 IN.
SCALE	0.0025

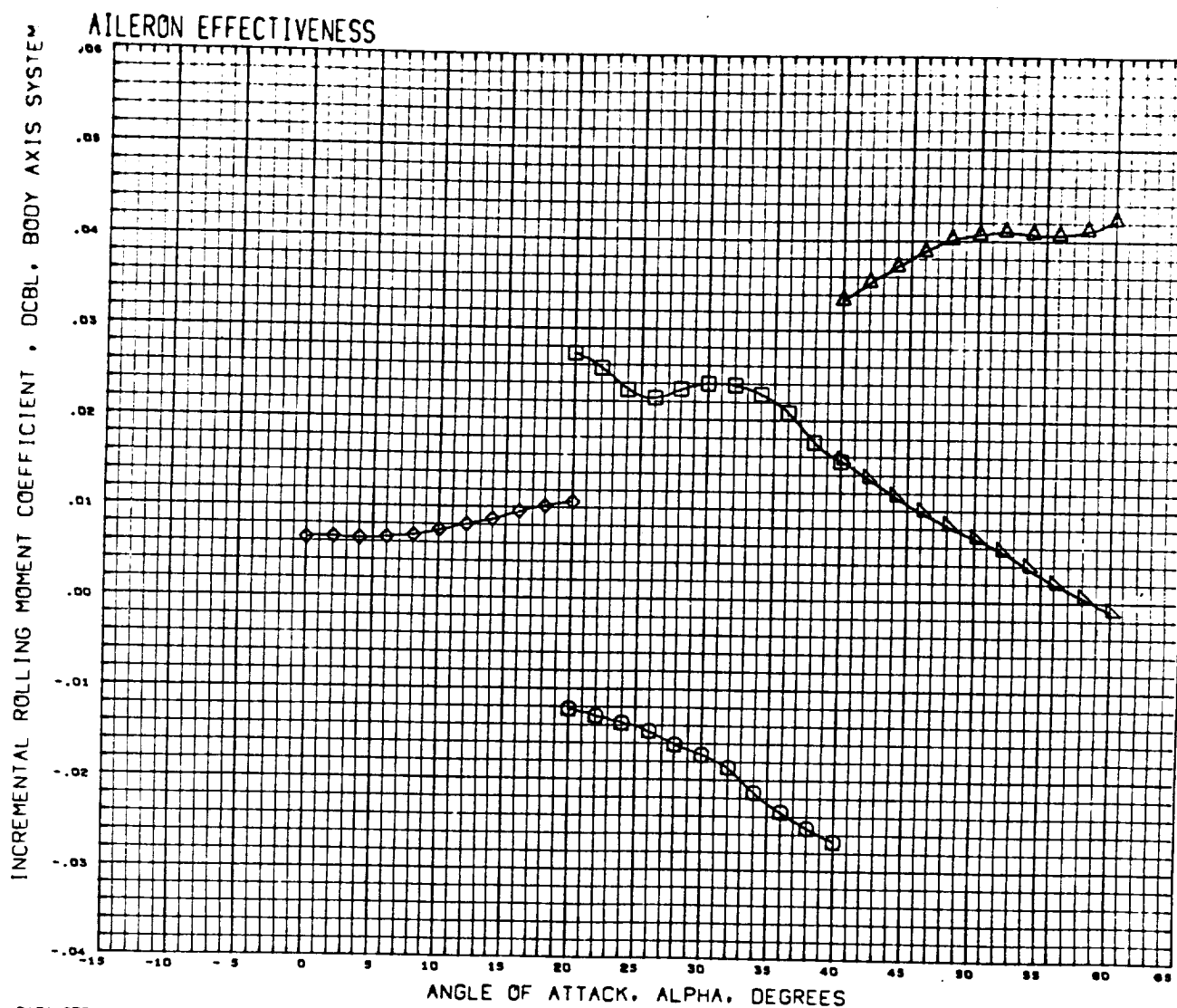
INCREMENTAL ROLLING MOMENT COEFFICIENT . DCBL. BODY AXIS SYSTEM


AILERON EFFECTIVENESS



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	DEL	DER	AILRON	REFERENCE INFORMATION
(K3810M)	M496-HSFC AR11981-3 MOEL W682V2	-30.000	0.000	-15.000	SREP 4.6225 50. IN.
(K3812K)	M496-HSFC AR11981-3 MOEL W682V2	0.000	0.000	0.000	LREP 1.5360 IN.
(K3806A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	10.000	0.000	5.000	BREP 4.3000 IN.
(K3807H)	M496-HSFC AR11981-3 MOEL W682V2	30.000	0.000	15.000	XHRP 2.4000 IN.
(K3807K)	M496-HSFC AR11981-3 MOEL W682V2	30.000	0.000	15.000	YHRP 0.0000 IN.
					ZHRP 0.0000 IN.
					SCALE 0.0025

MACH 1.200

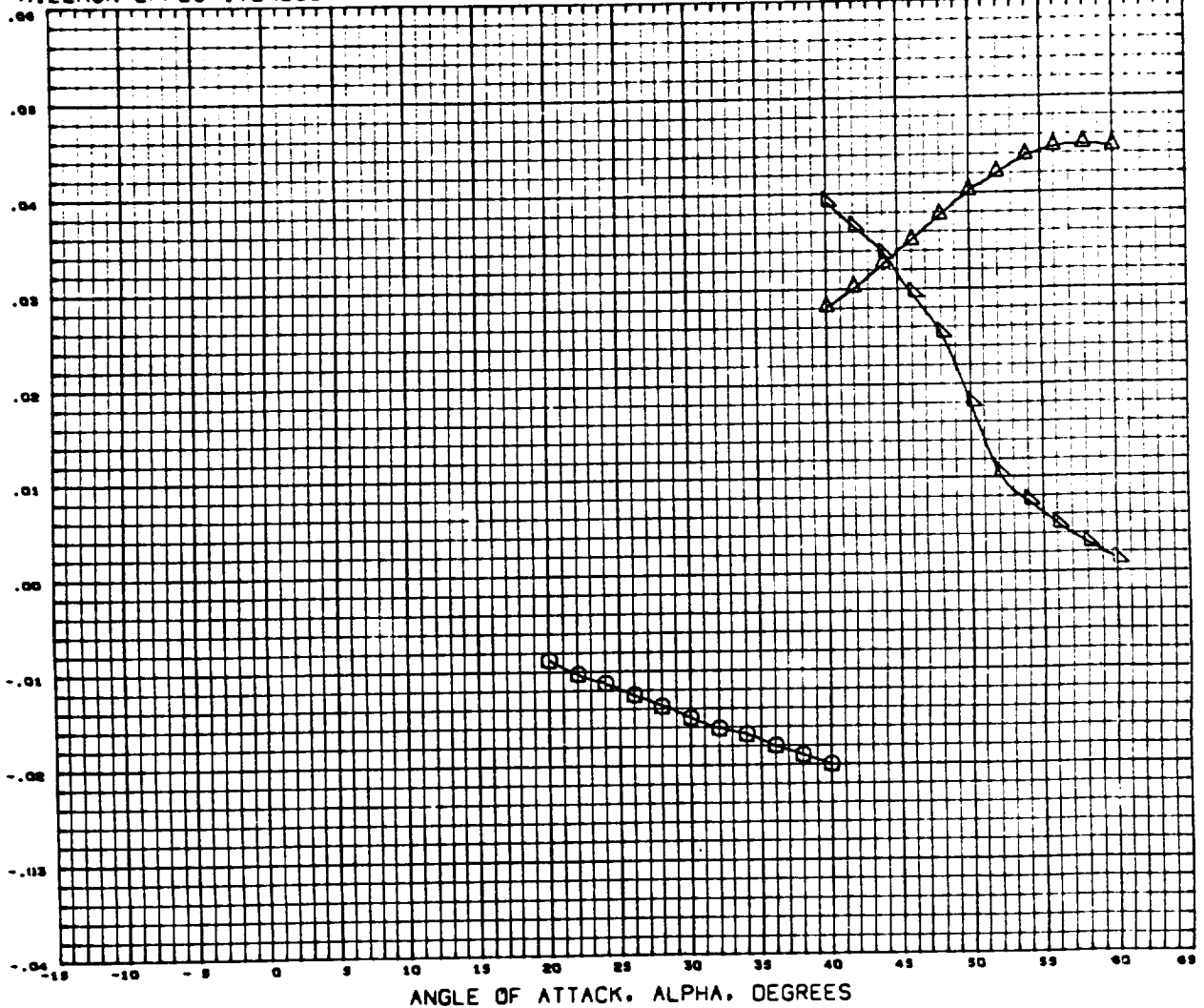


DATA SET SYMBOL		CONFIGURATION DESCRIPTION		DEL	DER	AILRON	REFERENCE INFORMATION				
(K3610H)		M496-MSFC	AR11981-3	MODEL	W6B2V2	-30.000	0.000	-15.000	SREF	4.6225	53.1N.
(K3612K)		M496-MSFC	AR11981-3	MODEL	W6B2V2	0.000	0.000	0.000	LREF	1.5360	IN.
(K3608A)		M496-MSFC	AR11981-3	MODEL	W6B2V2	10.000	0.000	5.000	SREF	4.3000	IN.
(K3607H)		M496-MSFC	AR11981-3	MODEL	W6B2V2	30.000	0.000	15.000	XMRP	2.4000	IN.
(K3607K)		M496-MSFC	AR11981-3	MODEL	W6B2V2	30.000	0.000	15.000	YMRP	0.0000	IN.
MACH		1.960									
				SCALE 0.0025							

MACH 1.960

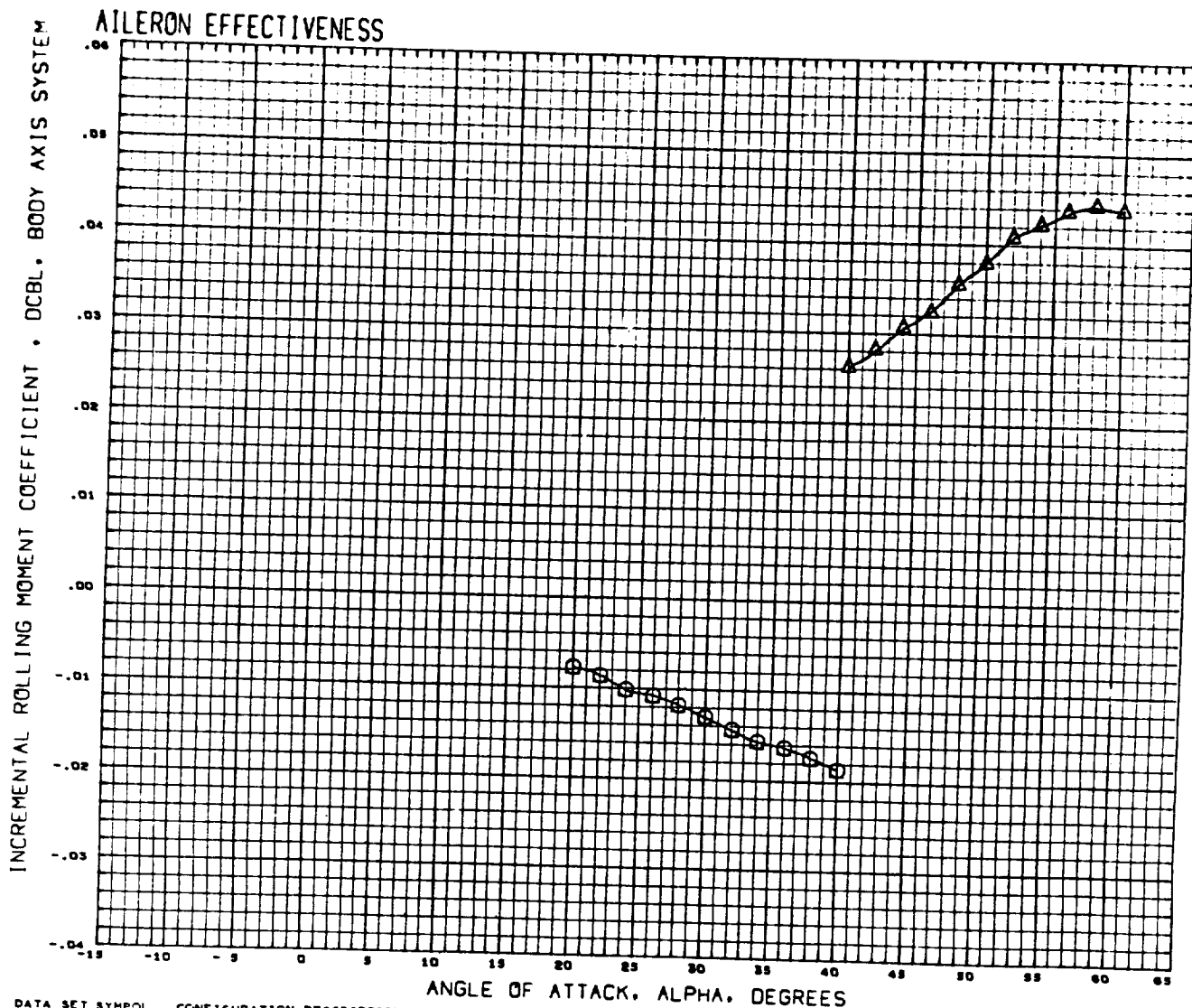
INCREMENTAL ROLLING MOMENT COEFFICIENT, DCBL. BODY AXIS SYSTEM

AILERON EFFECTIVENESS



DATA SET SYMBOL				CONFIGURATION DESCRIPTION			DEL			DER			AILRON			REFERENCE INFORMATION		
(K3810M)		M496-MSFC	AR11981-3	MODEL	W682V2		-30.000	0.000	-15.000							SREF	4.6225	33. IN.
(K3812K)		M496-MSFC	AR11981-3	MODEL	W682V2		0.000	0.000	0.000							LREF	1.5360	IN.
(K3808A)		DATA NOT AVAILABLE FOR ALL CONDITIONS					10.000	0.000	5.000							BREF	4.3000	IN.
(K3807M)		DATA NOT AVAILABLE FOR ALL CONDITIONS					30.000	0.000	15.000							XMRP	2.4000	IN.
(K3807K)		M496-MSFC	AR11981-3	MODEL	W682V2		30.000	0.000	15.000							ZMRP	0.0000	IN.
																YMRP	0.0000	IN.
																SCALE	0.0025	

MACH 3.500



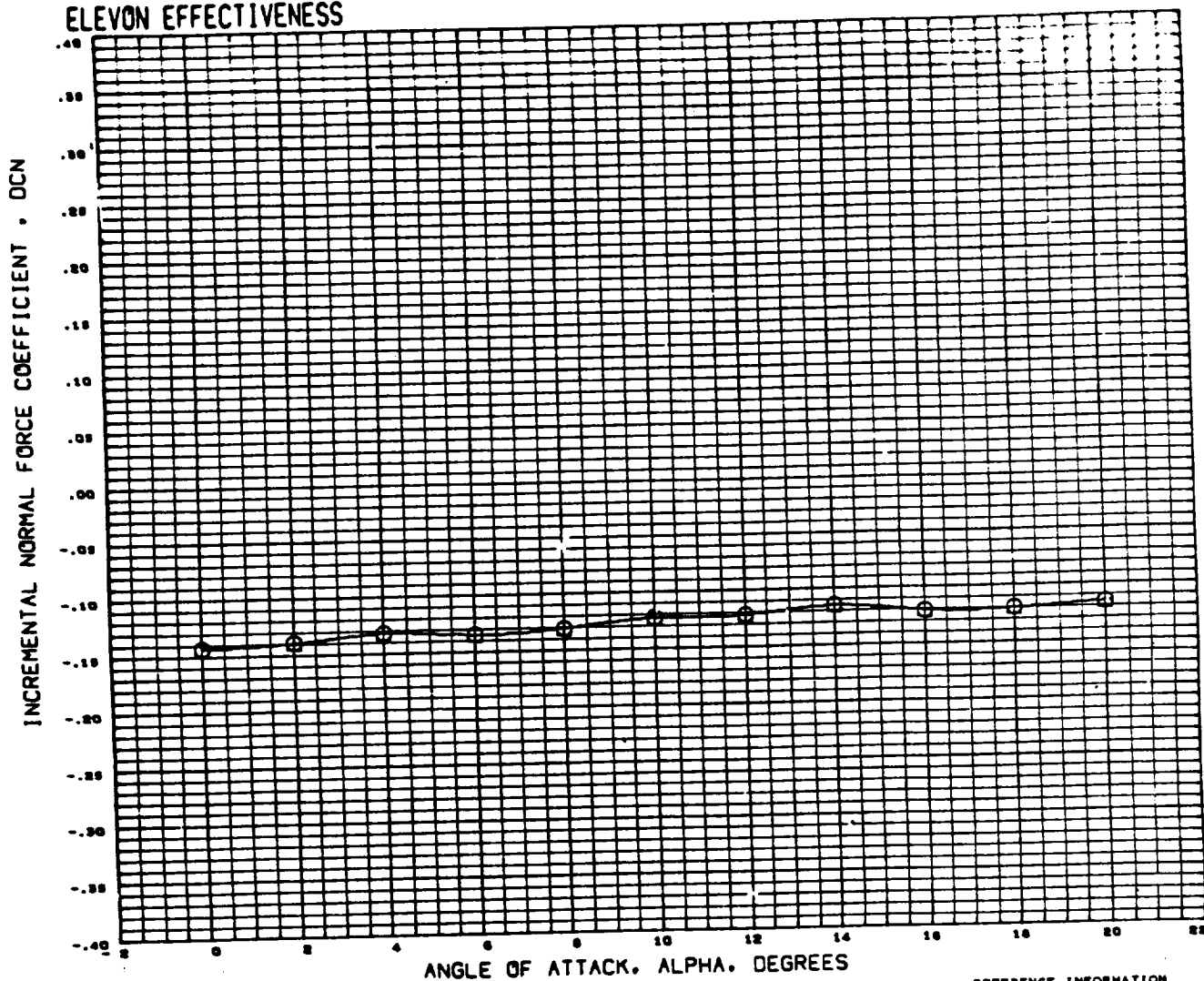
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(K3810H)	M496-HSFC AR11981-3 MODEL W8B2V2
(K3812K)	M496-HSFC AR11981-3 MODEL W8B2V2
(K3805A)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807H)	DATA NOT AVAILABLE FOR ALL CONDITIONS
(K3807K)	DATA NOT AVAILABLE FOR ALL CONDITIONS

MACH 4.960

DEL	DER	AILRON
-30.000	0.000	-15.000
0.000	0.000	0.000
10.000	0.000	5.000
30.000	0.000	15.000

REFERENCE INFORMATION	
SREF	4.6225 sq. in.
LREF	1.8360 in.
BREF	4.3000 in.
XMRP	2.4000 in.
YMRP	0.0000 in.
ZMRP	0.0000 in.
SCALE	0.0025

ELEVON EFFECTIVENESS

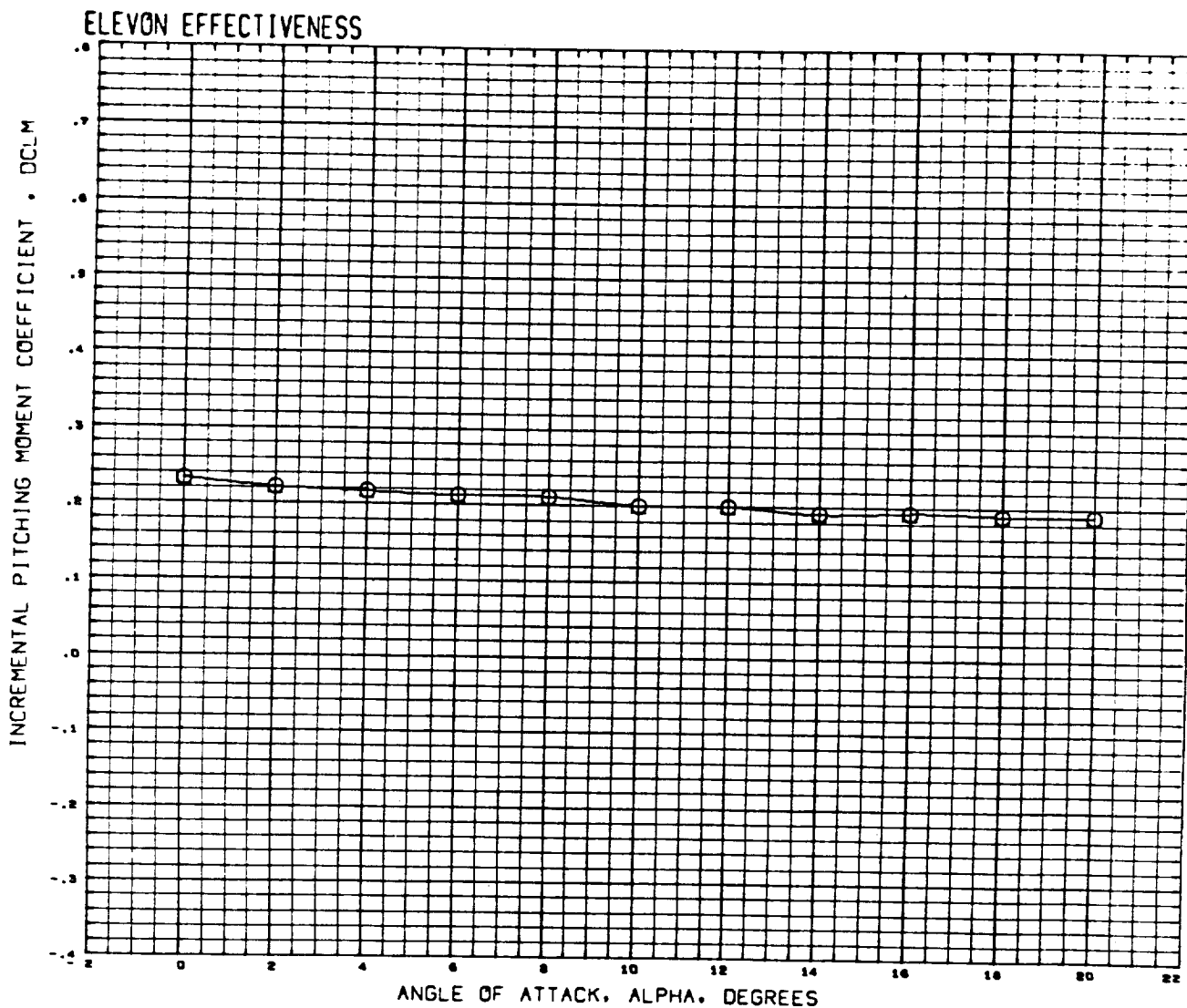


SYMBOL \bigcirc MACH 1.960
 BETA 0.000
 DER -30.000

PARAMETRIC VALUES
 DEL -30.000
 AILRON 0.000

REFERENCE INFORMATION
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 BREP 4.3000 IN.
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 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

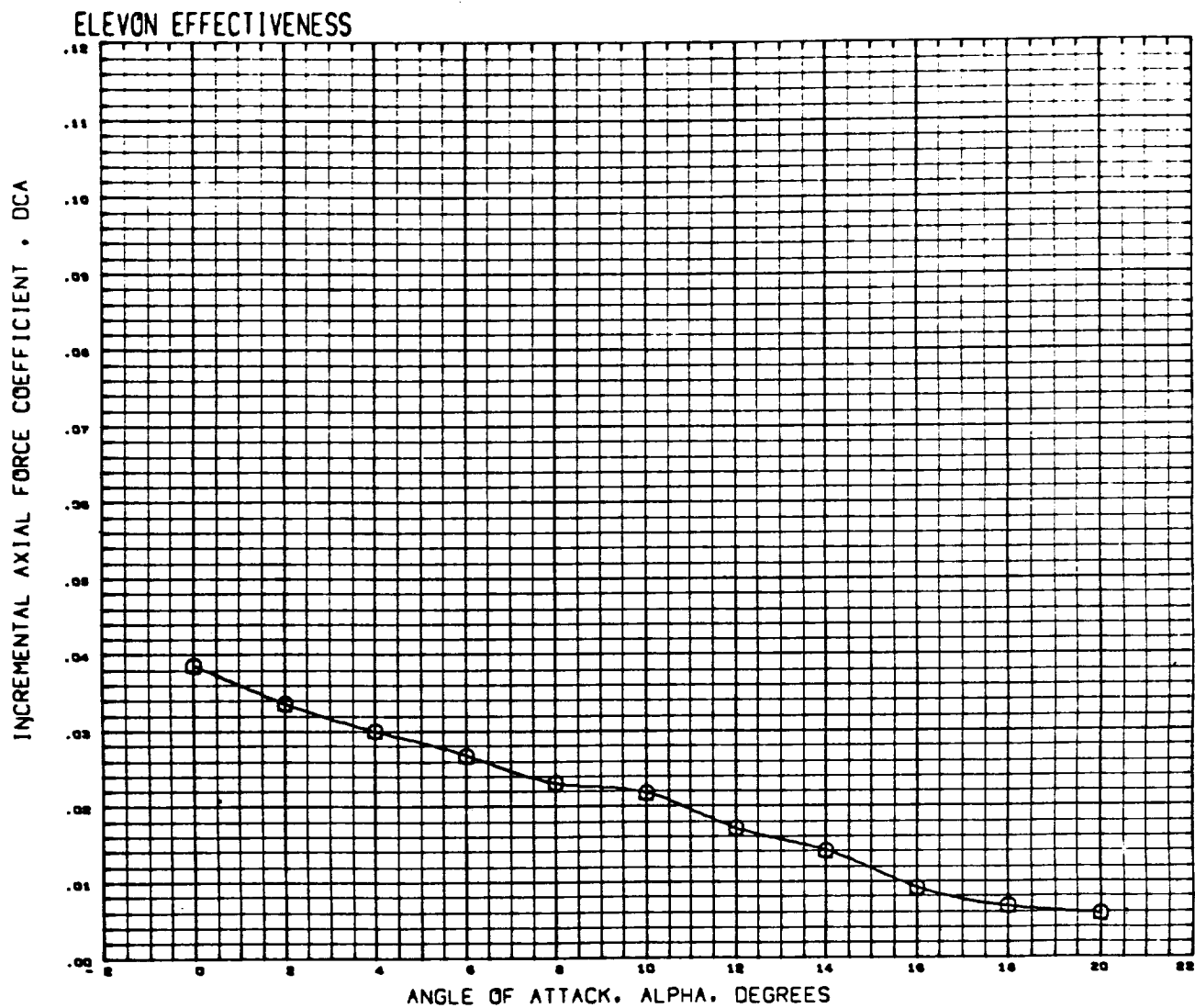
DATA HIST. CODE VI=C



SYMBOL ○	MACH	PARAMETRIC VALUES			
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		DER	- 30.000	ATLRON	0.000

REFERENCE INFORMATION		
SREF	4.6225	SQ. IN.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE	VI*C
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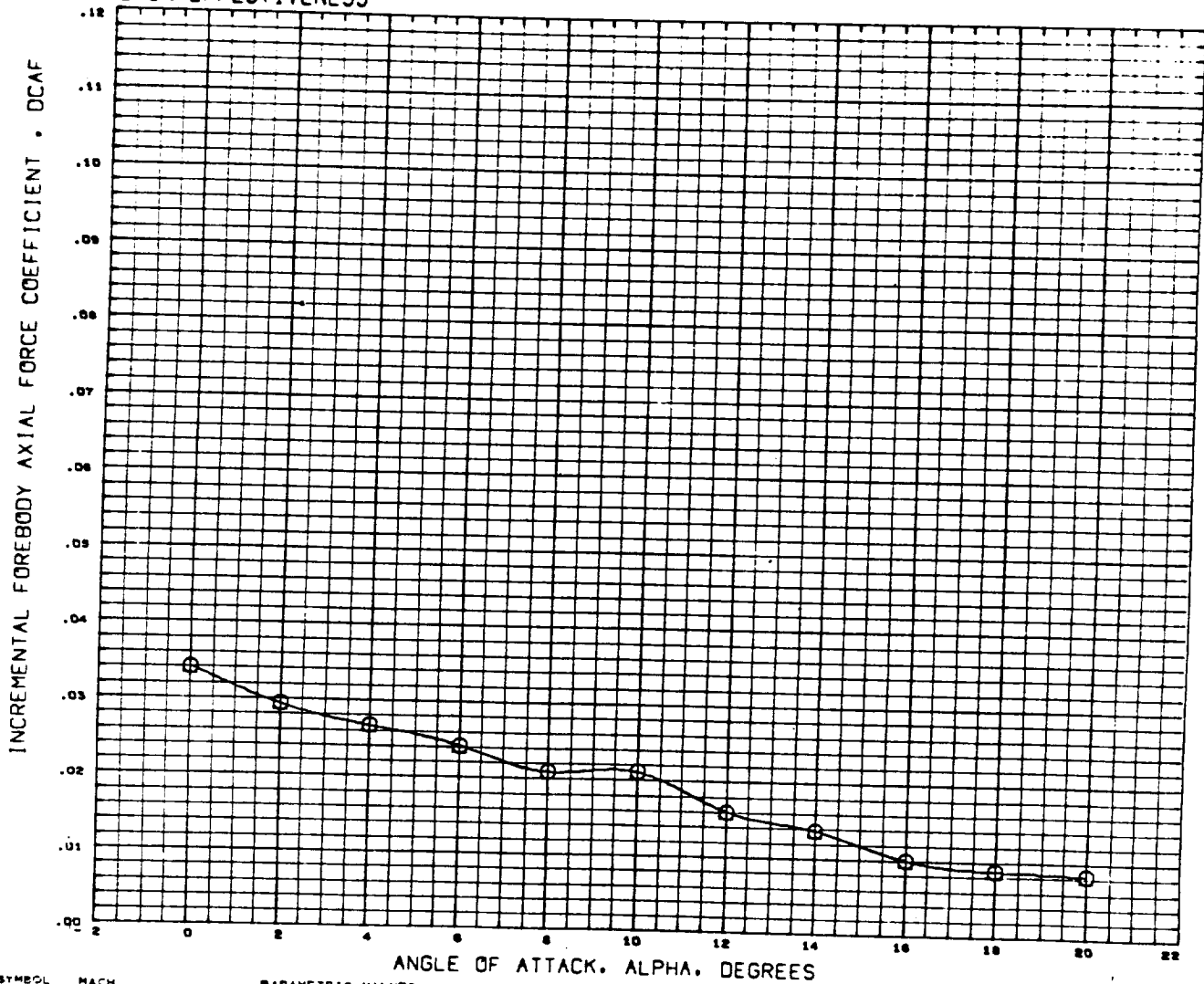


SYMBOL	MACH	PARAMETRIC VALUES			
○	1.980	BETA	0.000	DEL	- 30.000
		DER	- 30.000	AILRON	0.000

REFERENCE INFORMATION		
SREP	4.6225	50. IN.
LREP	1.5360	IN.
BREP	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE VI=C

ELEVON EFFECTIVENESS



SYMBOL \bigcirc MACH 1.980 BETA 0.000 DEL - 30.000
 DER - 30.000 ALLRON 0.000

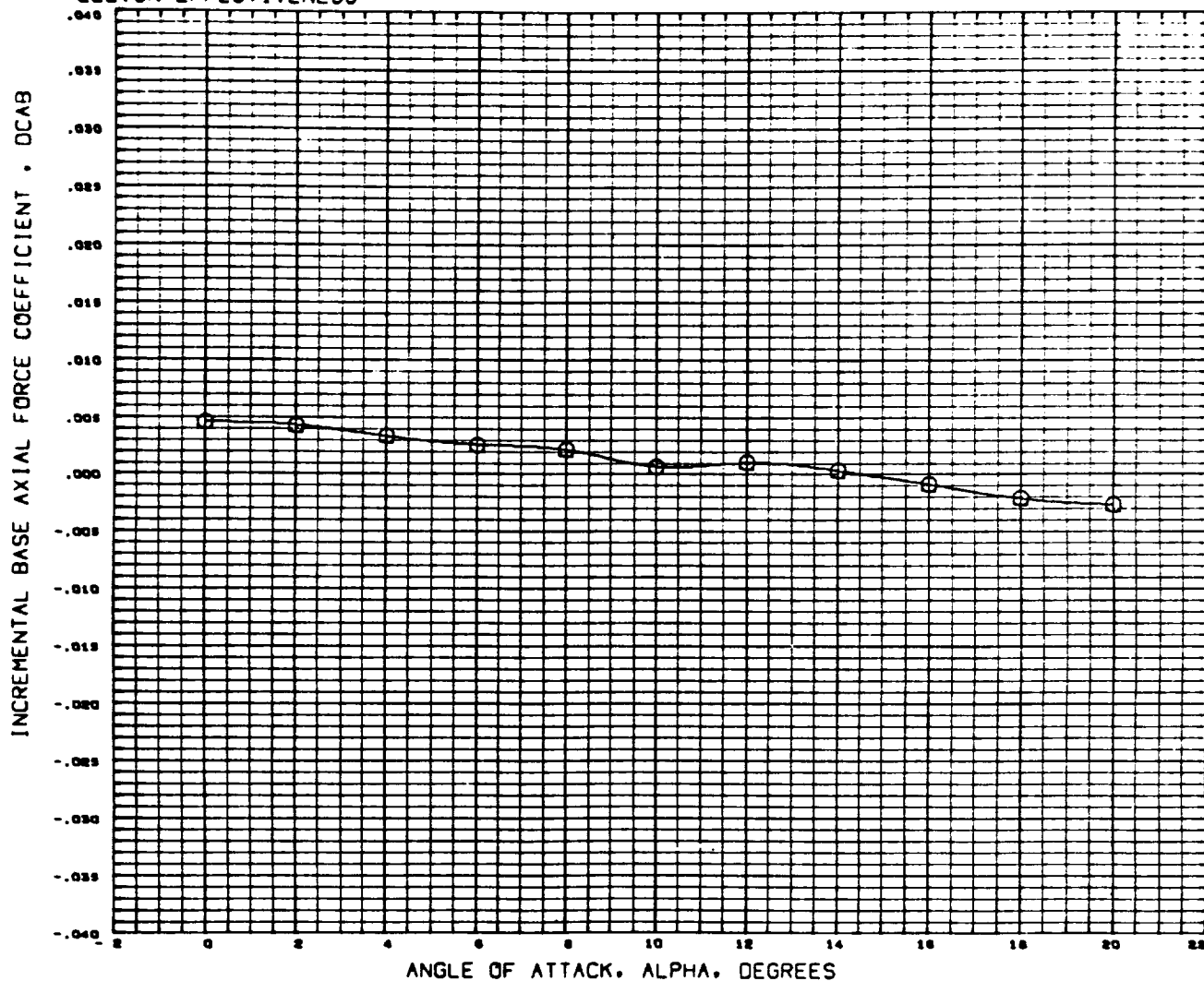
DATA HIST. CODE VI=C

REFERENCE INFORMATION
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 LREF 1.9380 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025 IN.

M496-MSFC AR11981-3 MODEL W6B2V2

(K3811A) 06 SEP 72 PAGE 881

ELEVON EFFECTIVENESS



SYMBOL \square MACH 1.960
 BETA 0.000 DEL - 30.000
 DER - 30.000 AILRON 0.000

REFERENCE INFORMATION
 SREP 4.6225 SQ. IN.
 LREP 1.5360 IN.
 BREP 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE VISC

M496-MSFC

AR1198I-3

MODEL

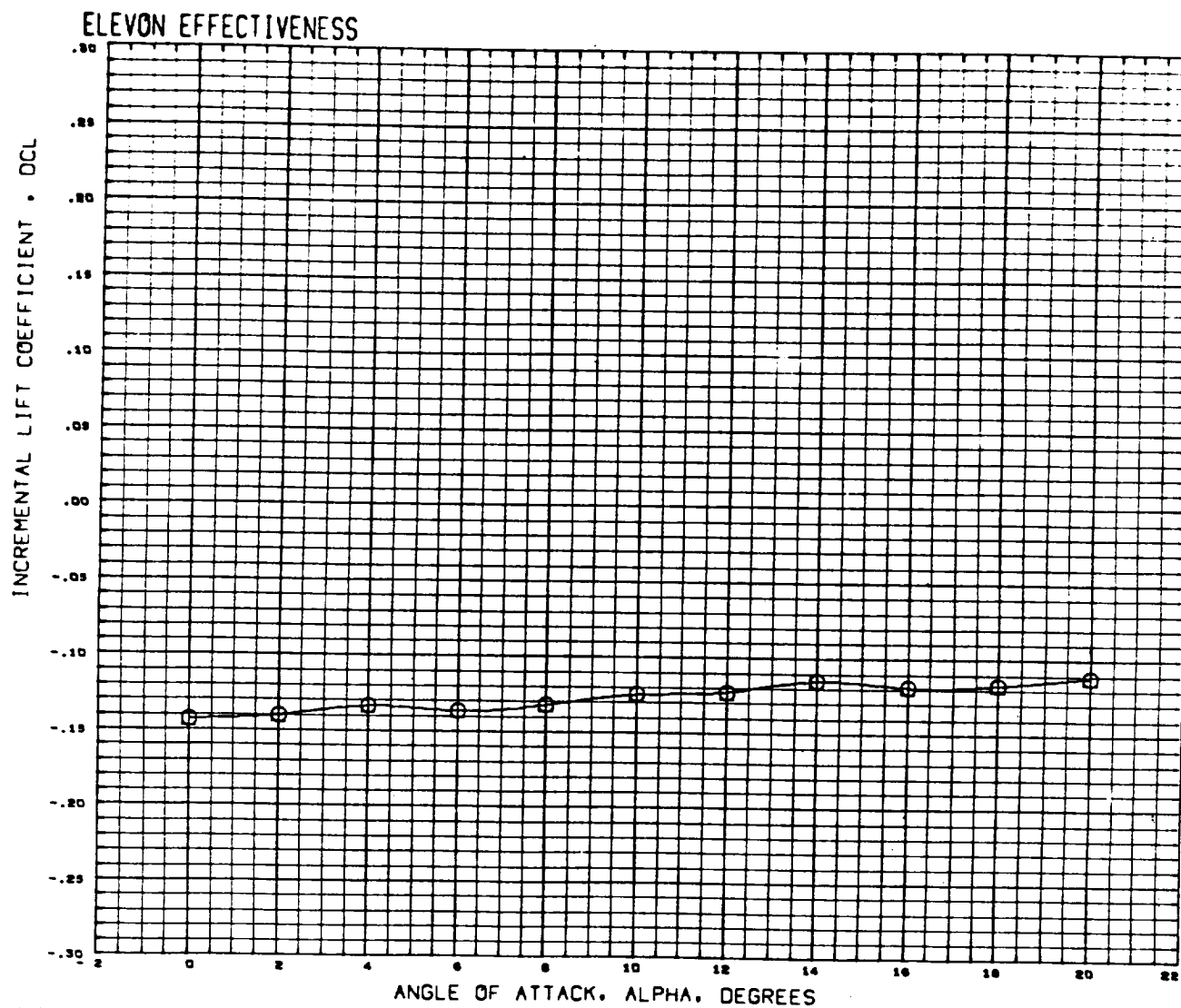
W682V2

(K3811A)

06 SEP 72

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882

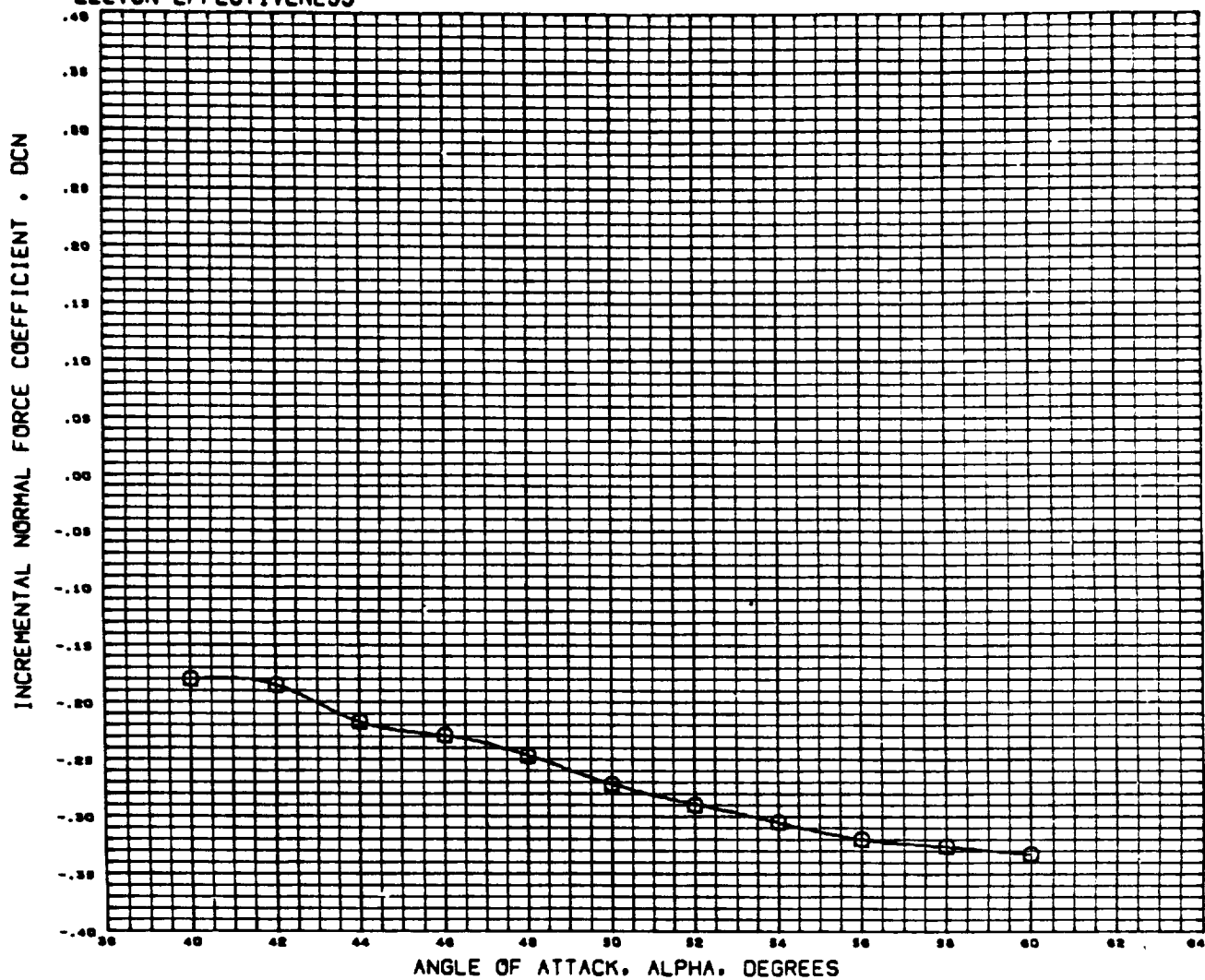


SYMBOL \bigcirc MACH 1.960
 BETA 0.000 DEL - 30.000
 DER - 30.000 ATLRON 0.000

REFERENCE INFORMATION
 SREF 4.6225 SQ. IN.
 LREF 1.9360 IN.
 BREF 4.3000 IN.
 XMRP 2.4000 IN.
 YMRP 0.0000 IN.
 ZMRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE VIC

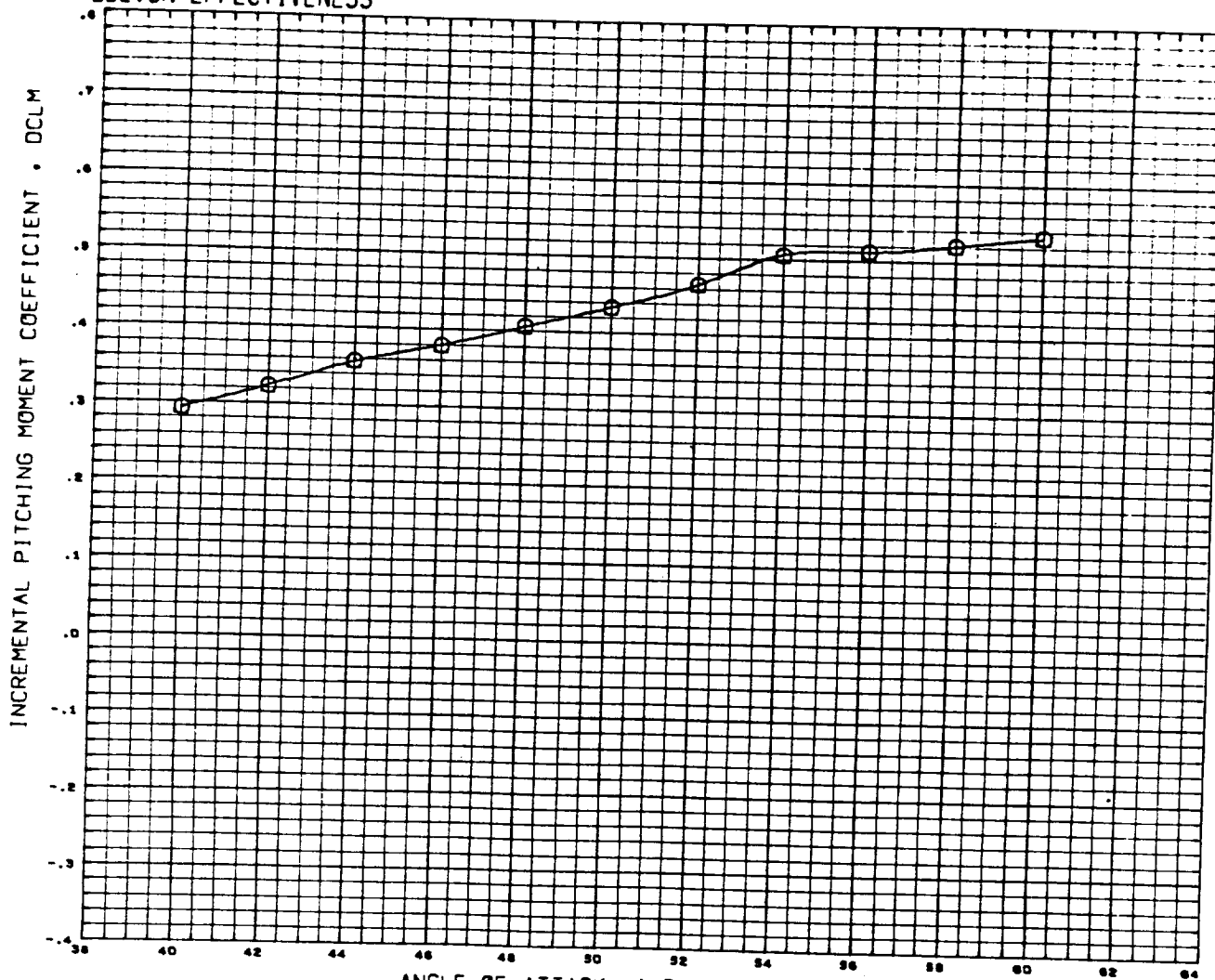
ELEVON EFFECTIVENESS



SYMBOL	MACH	PARAMETRIC VALUES			REFERENCE INFORMATION		
○	4.900	BETA	0.000	CANARD	- 00.000	SREF	4.6225
		DEL	0.000	DER	0.000	LREF	1.3360
		ATLROM	0.000			BREF	4.3000
						XNRP	2.4000
						YNRP	0.0000
						ZNRP	0.0000
						SCALE	0.0025

DATA HIST. CODE VIAC

ELEVON EFFECTIVENESS



SYMBOL

○

MACH

4.960

PARAMETRIC VALUES

BETA 0.000 CANARD - 60.000
DEL 0.000 DER 0.000
AILRON 0.000

REFERENCE INFORMATION

SREF 4.6225 50. IN.
LREF 1.5360 IN.
BREF 4.3000 IN.
XMRP 2.4000 IN.
YMRP 0.0000 IN.
ZMRP 0.0000 IN.
SCALE 0.0025

DATA HIST. CODE VI* C

M496-MSFC

AR11981-3

MODEL

W6B2C12V2

(K3821K)

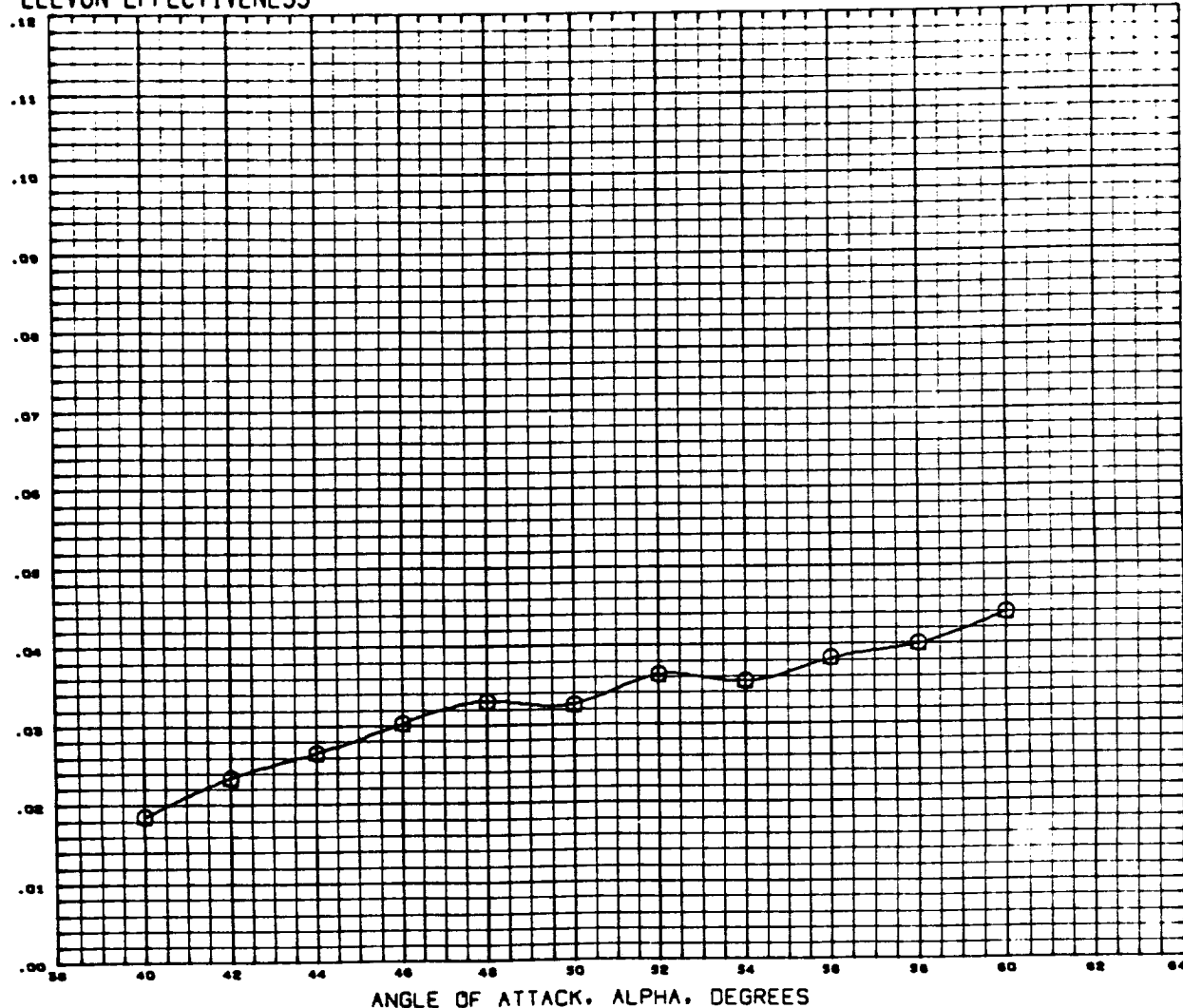
06 SEP 72

PAGE

885

ELEVON EFFECTIVENESS

INCREMENTAL AXIAL FORCE COEFFICIENT • DCA



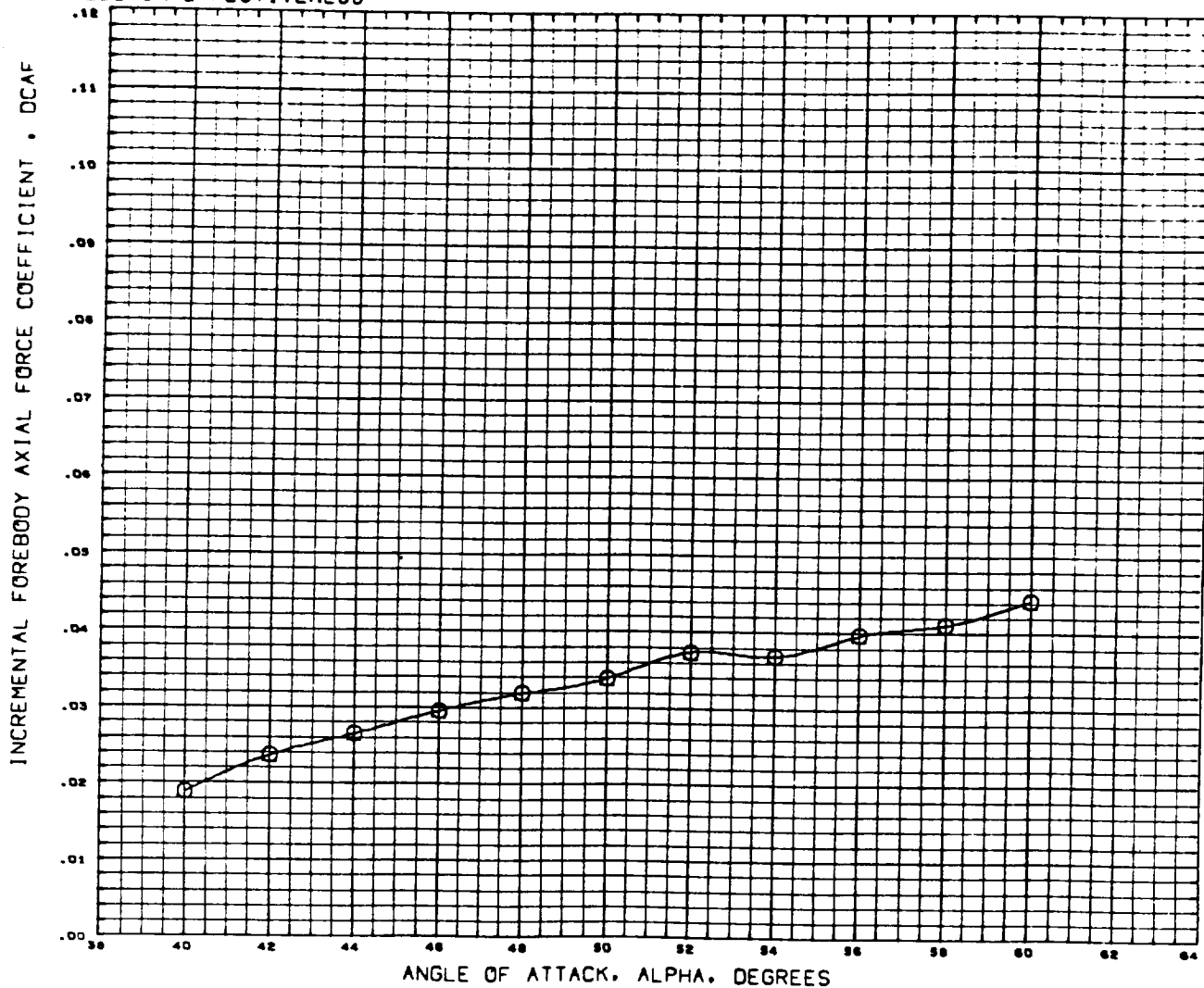
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○	4.960	BETA	0.000 CANARD - 60.000
		DEL	0.000 DER 0.000
		ATLRON	0.000

REFERENCE INFORMATION		
SREF	4.6223	53.1N.
LREF	1.5360	IN.
BREF	4.3000	IN.
XMRP	2.4000	IN.
YMRP	0.0000	IN.
ZMRP	0.0000	IN.
SCALE	0.0025	

DATA HIST. CODE VIC

M496-MSFC AR11981-3 MODEL W6B2C12V2 (K3821K) 06 SEP 72 PAGE 886

ELEVON EFFECTIVENESS

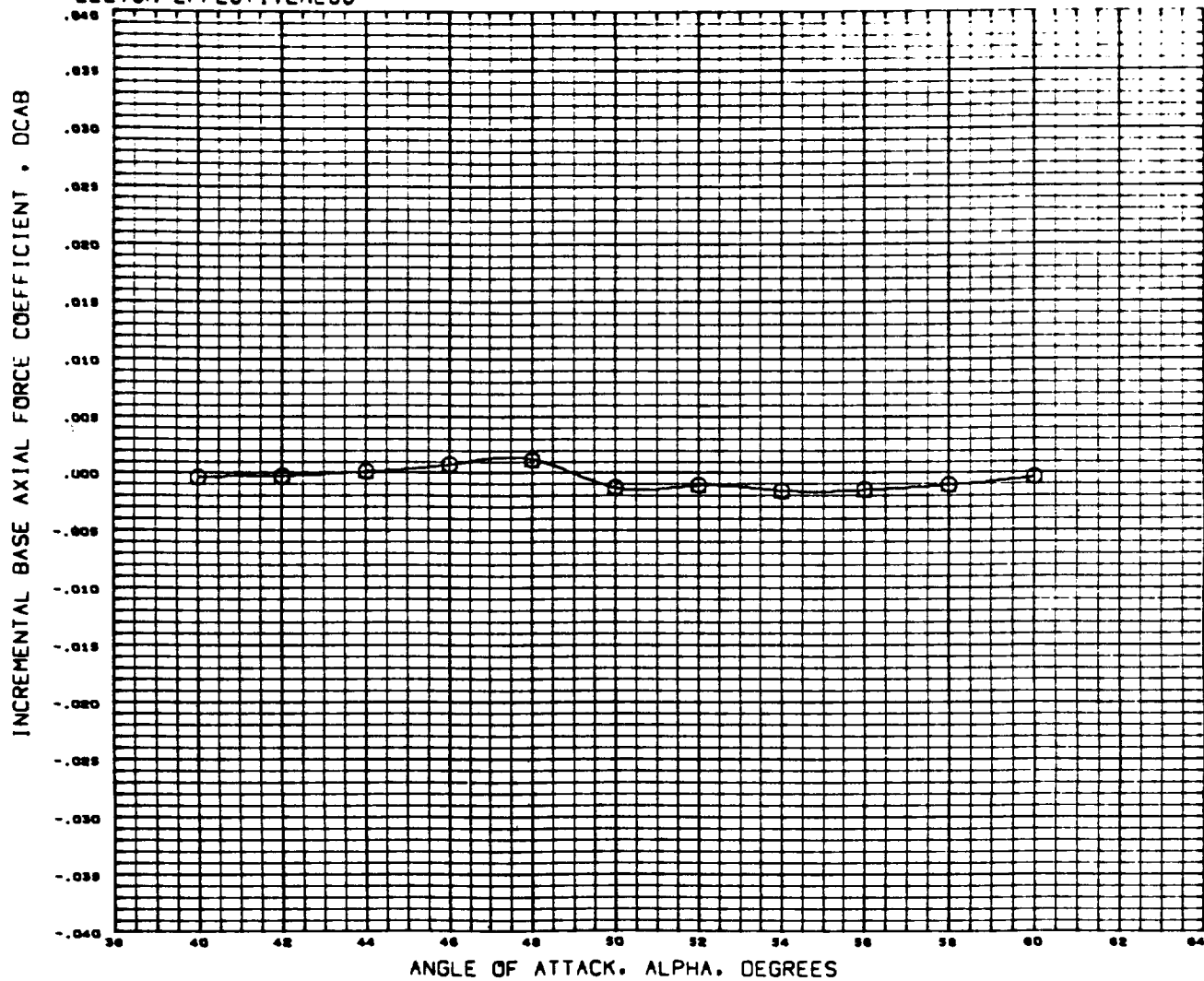


SYMBOL **O** MACH 4.960
 BETA 0.000 CANARD - 60.000
 DEL 0.000 DER 0.000
 ATLRON 0.000

REFERENCE INFORMATION
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 LREF 1.5360 IN.
 BREF 4.3000 IN.
 XHRP 2.4000 IN.
 YHRP 0.0000 IN.
 ZHRP 0.0000 IN.
 SCALE 0.0025

DATA HIST. CODE VI*C

ELEVON EFFECTIVENESS

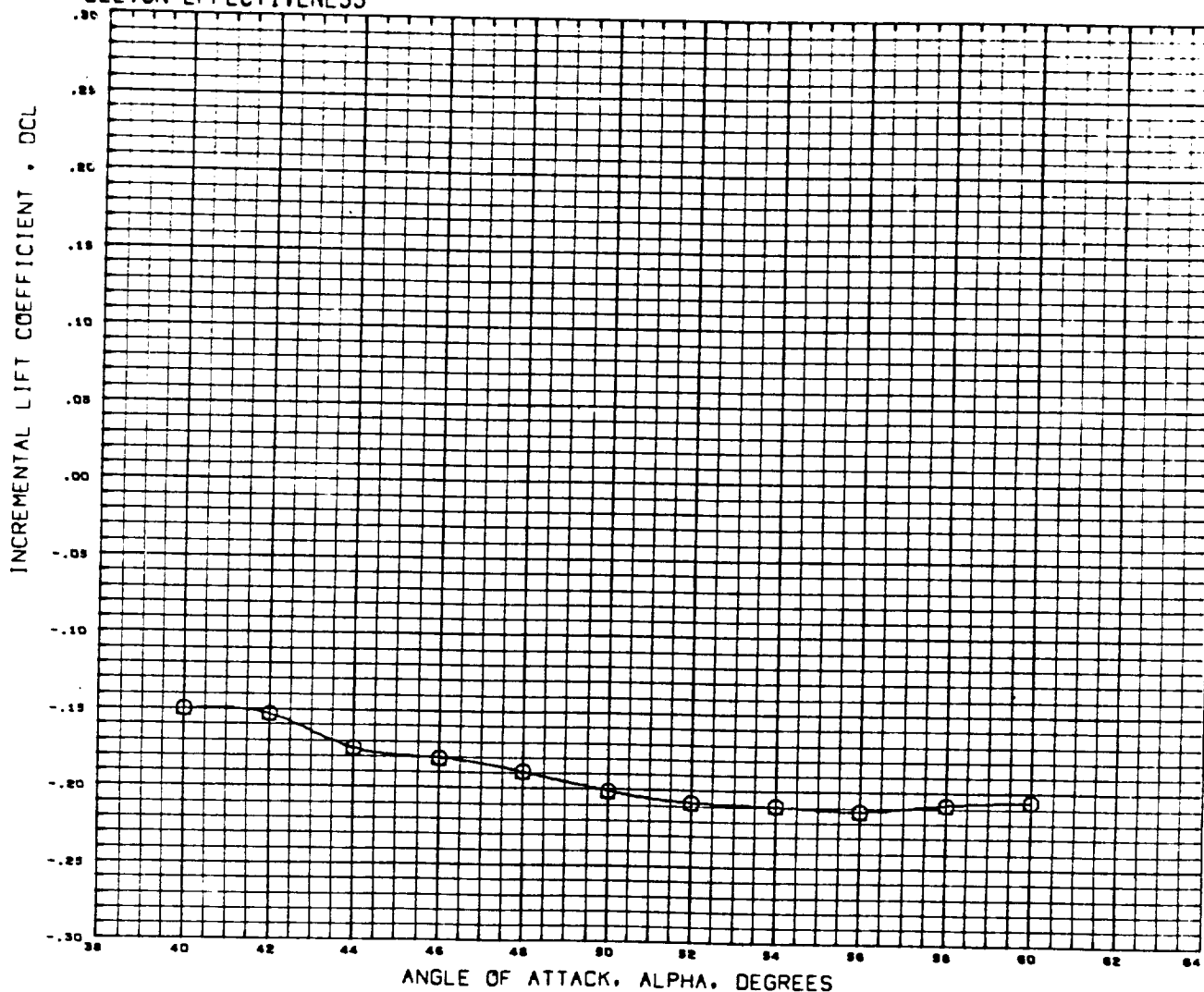


SYMBOL		MACH		PARAMETRIC VALUES				REFERENCE INFORMATION			
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		DEL	0.000	DER	0.000	LREF	1.5380	IN.			
		AILRON	0.000			BREF	4.3000	IN.			
						XMRP	2.4000	IN.			
						YMRP	0.0000	IN.			
						ZMRP	0.0000	IN.			
						SCALE	0.0025				
		DATA	LIST	CODE	VALUE						

DATA HIST. CODE VINC

M496-MSFC AR1198I-3 MODEL W6B2C12V2 (K3821K) 06 SEP 72 PAGE 888

ELEVON EFFECTIVENESS



SYMBOL

MACH

PARAMETRIC VALUES

REFERENCE INFORMATION

○

4.960

BETA

0.000

CANARD - 60.000

SREF

4.6225

SQ. IN.

DEL

0.000

DER

0.000

LREF

1.5360

IN.

ATLON

0.000

BREF

4.3000

IN.

XMRP

2.4000

IN.

YMRP

0.0000

IN.

ZMRP

0.0000

IN.

SCALE

0.0025

DATA HIST. CODE

VIC

M496-MSFC

AR11981-3

MODEL

W6B2C12V2

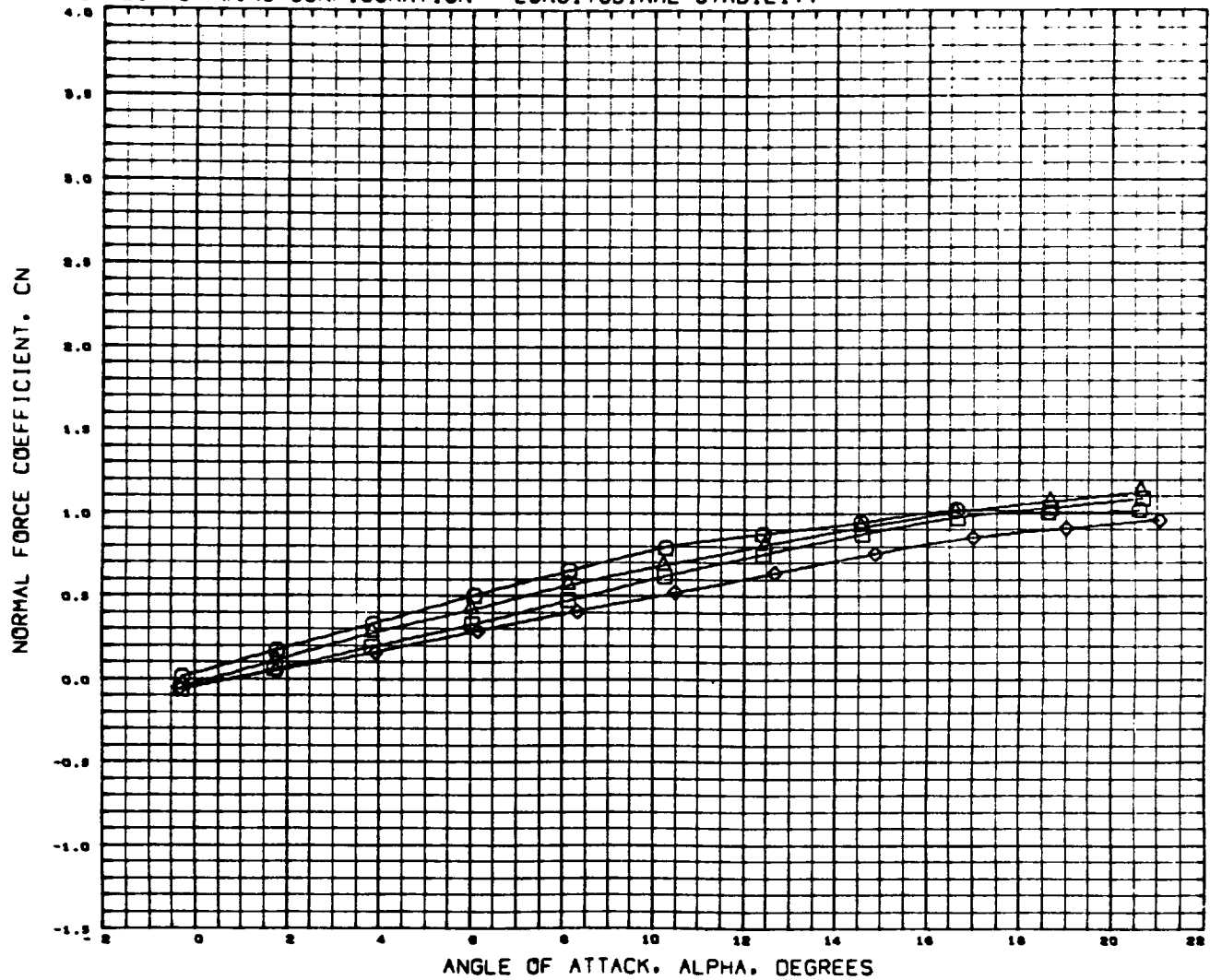
(K3821K)

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889

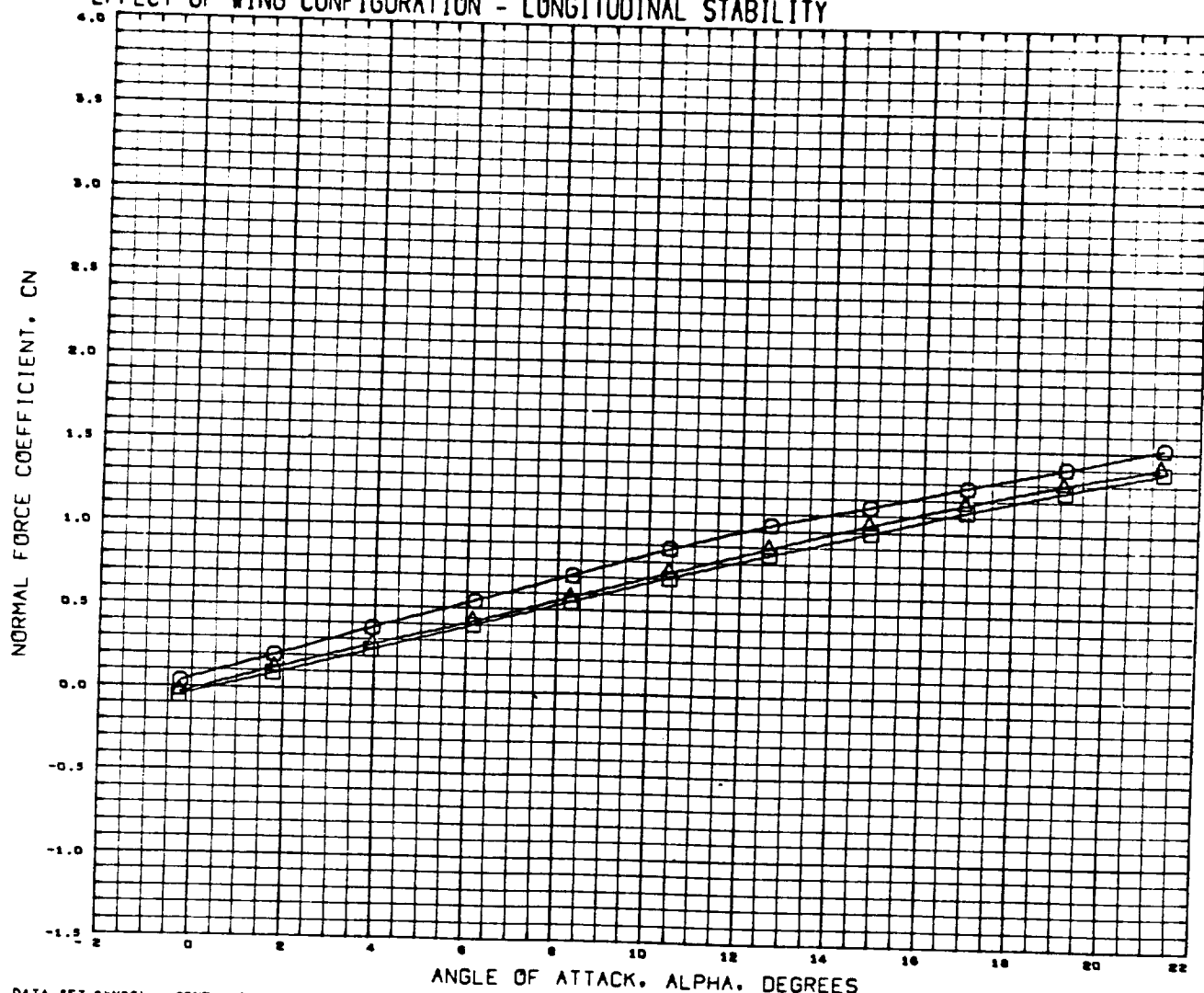
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	○	M496-H3FC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	□	M496-H3FC AR11981-3 MODEL W6H82C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	△	M496-H3FC AR11981-3 MODEL W9B2C12V1	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	◇	M496-H3FC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 0.398

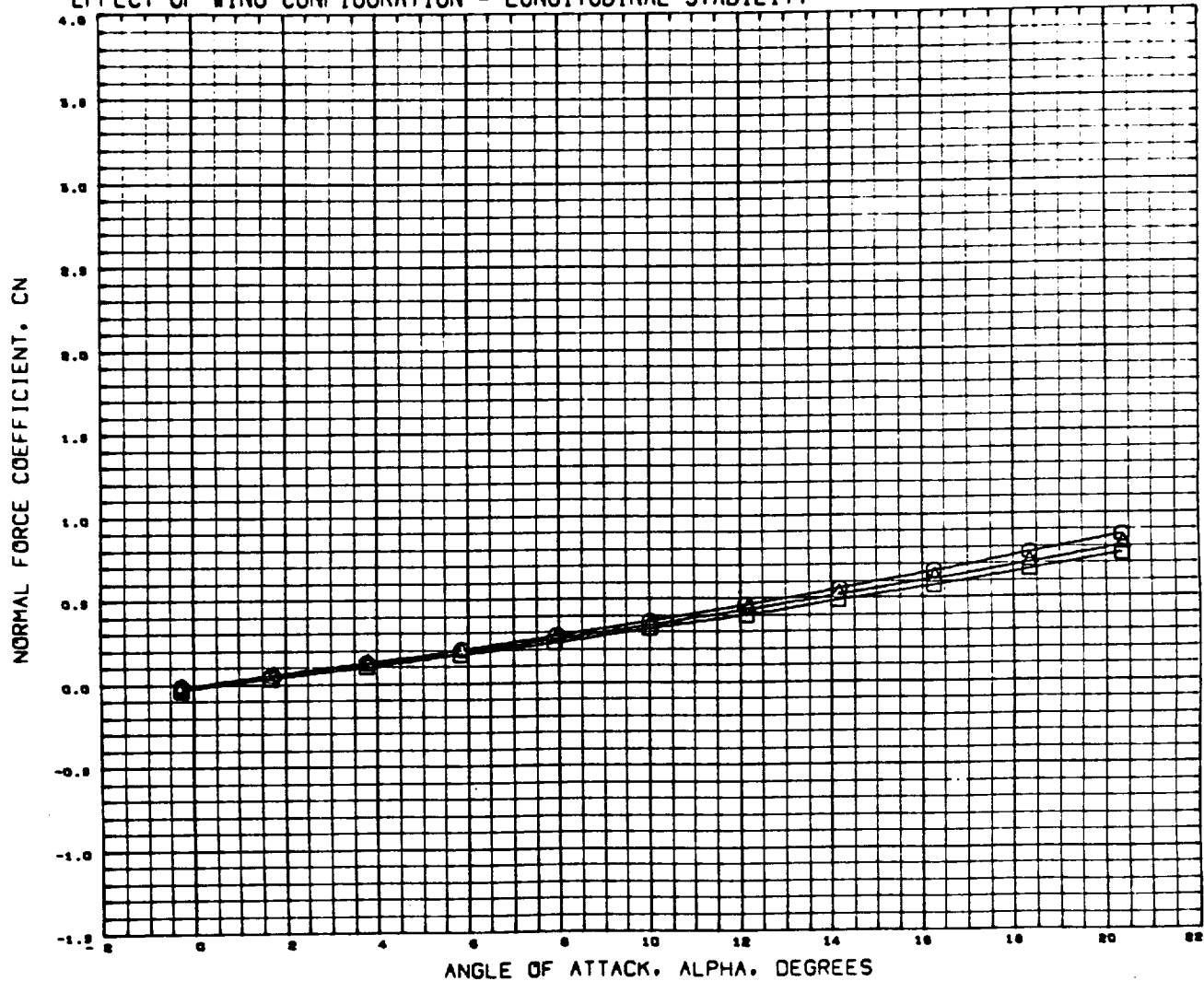
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3637A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	
(E3624A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(G3629A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

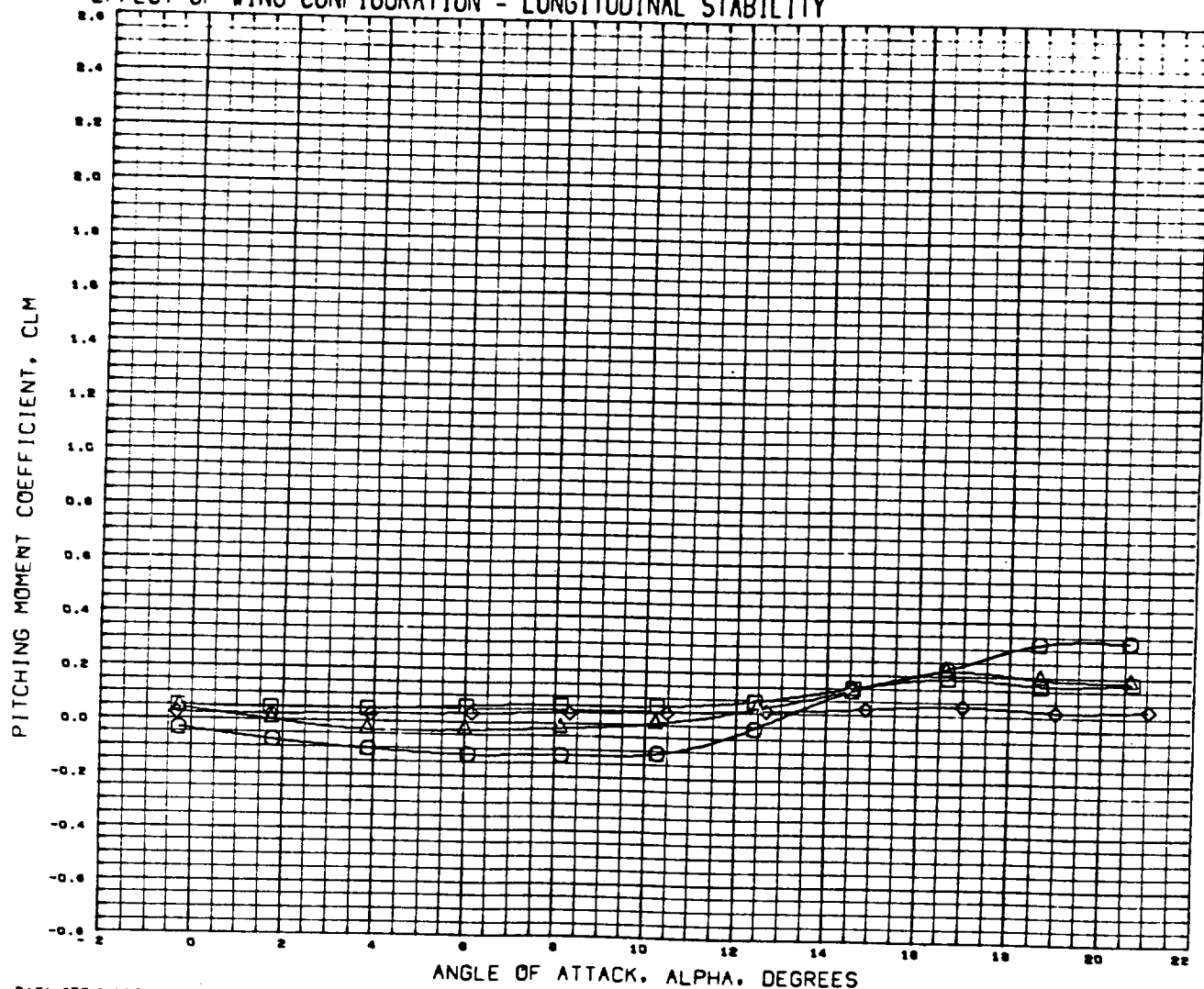
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	

MACH 3.400

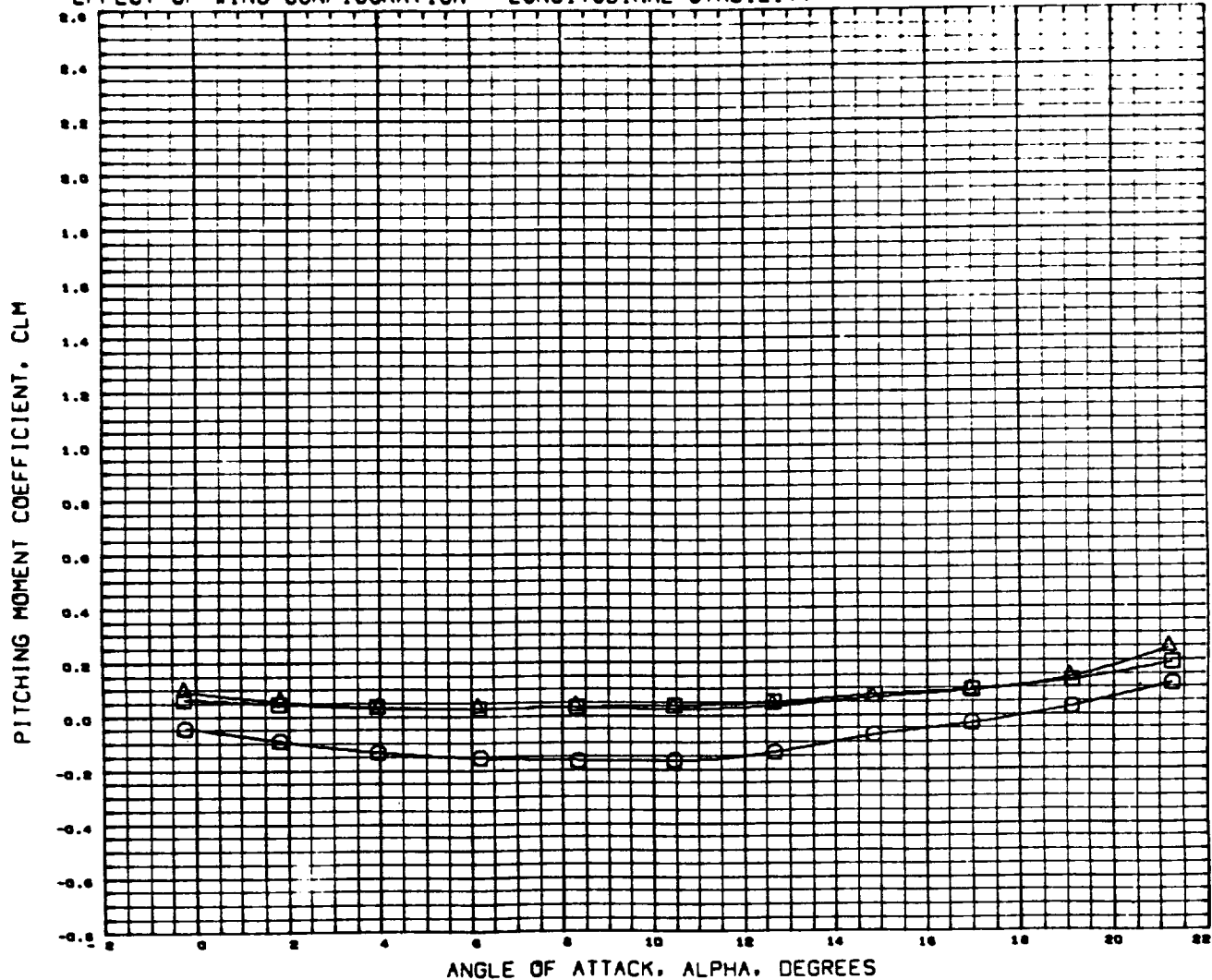
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E39174)	○	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	
(E3937A)	△	M496-HSFC AR11981-3 MODEL W6H82C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3924A)	◇	M496-HSFC AR11981-3 MODEL W9B2C12V1	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3929A)	□	M496-HSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	CHARACTERISTICS

MACH 0.596

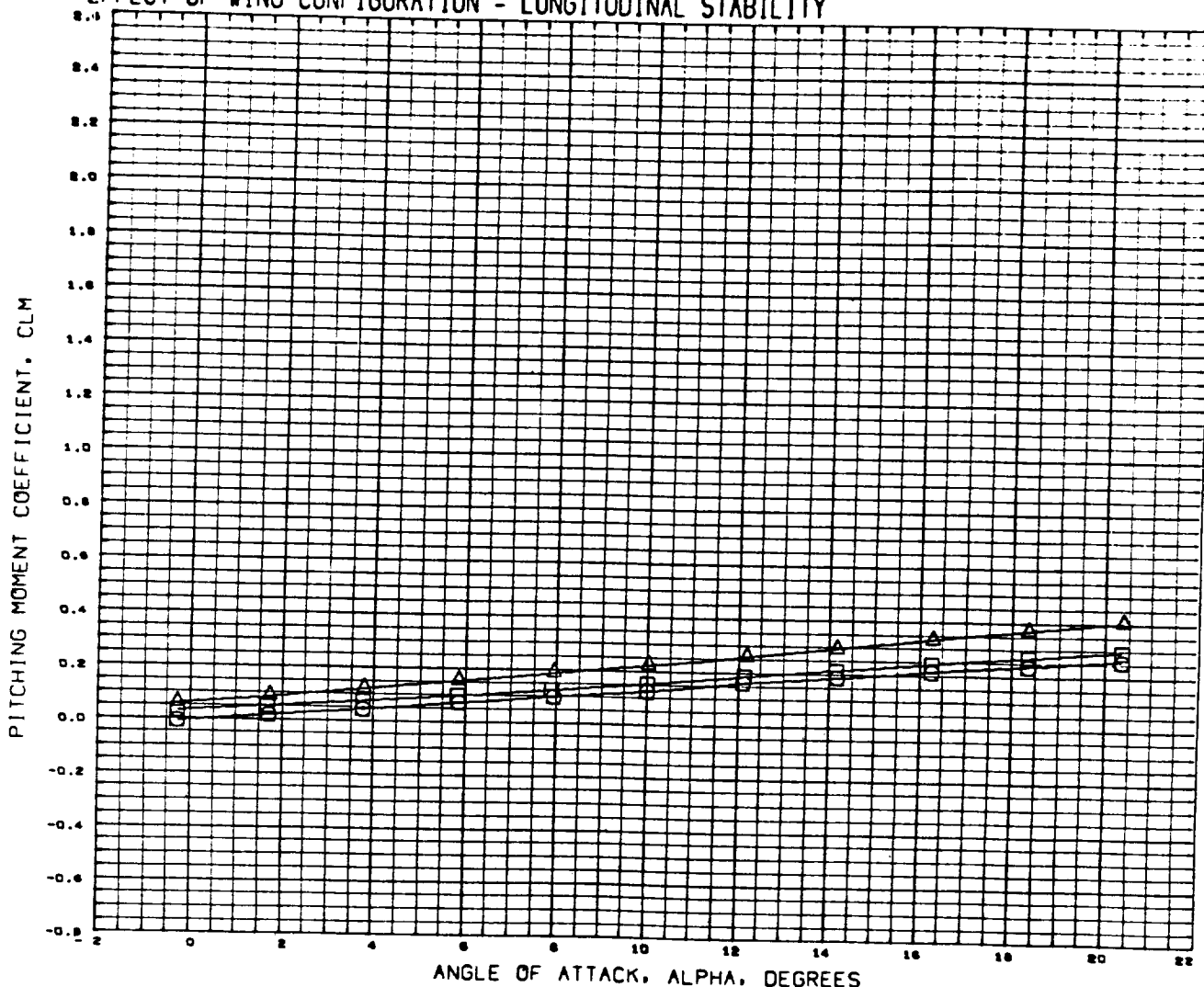
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-M3PC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3837A)	M496-M3PC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(E3829A)	M496-M3PC AR11961-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

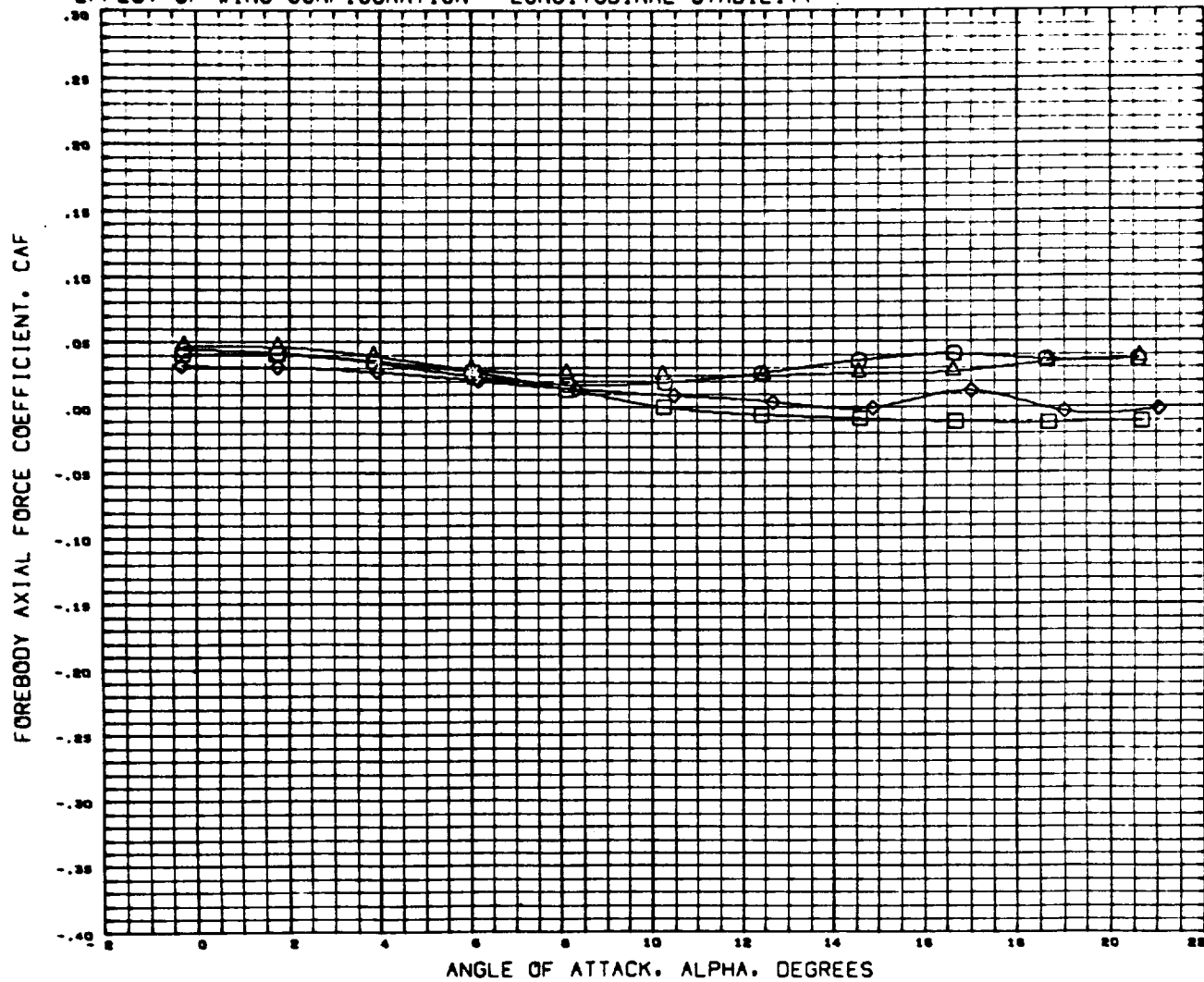
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3837A)	M496-MSFC AR11981-3 MODEL W6H2C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(G3829A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	

MACH 3.480

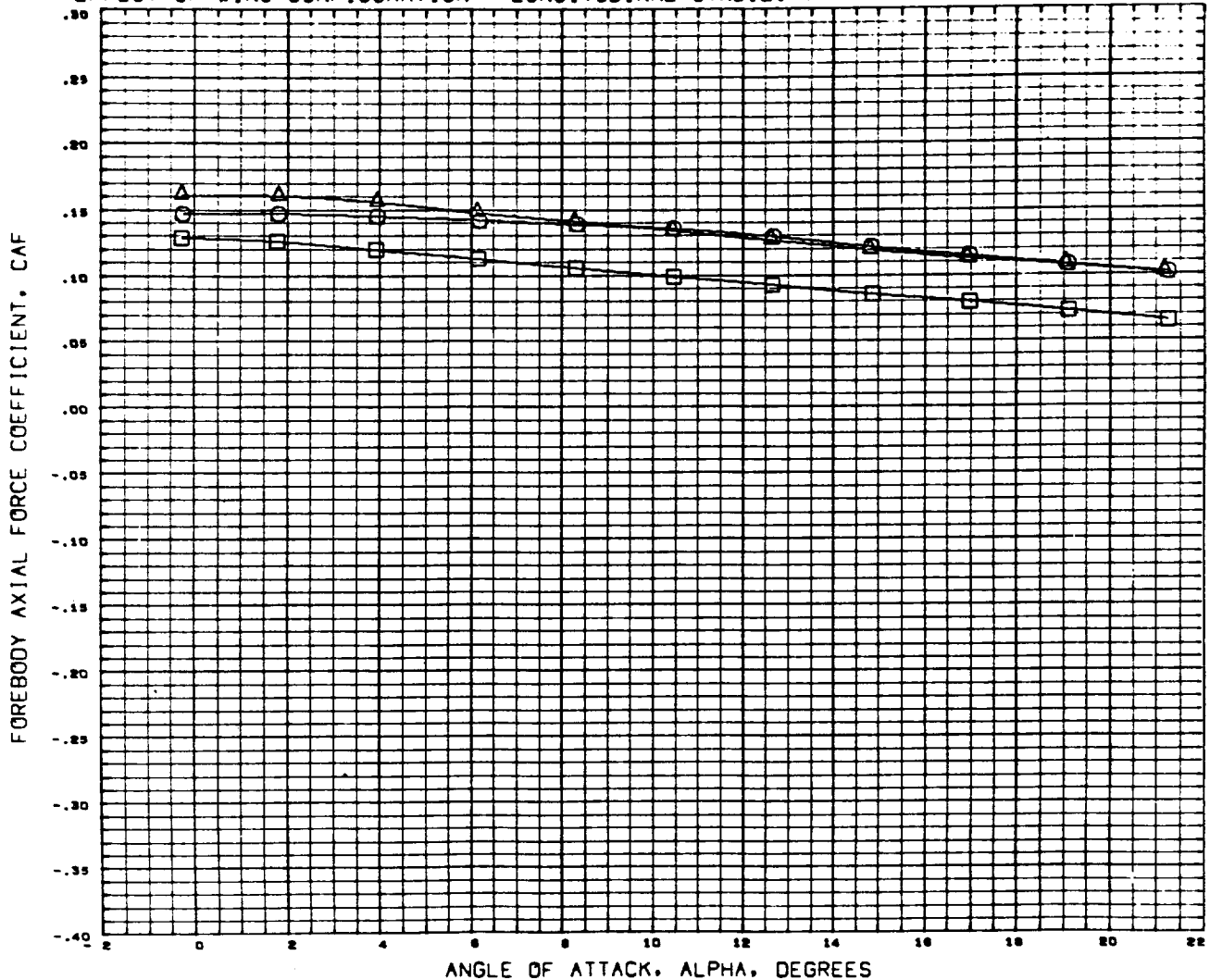
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	H496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3637A)	H496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3624A)	H496-HSFC AR11981-3 MODEL W6B2C12V1	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3629A)	H496-HSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 0.990

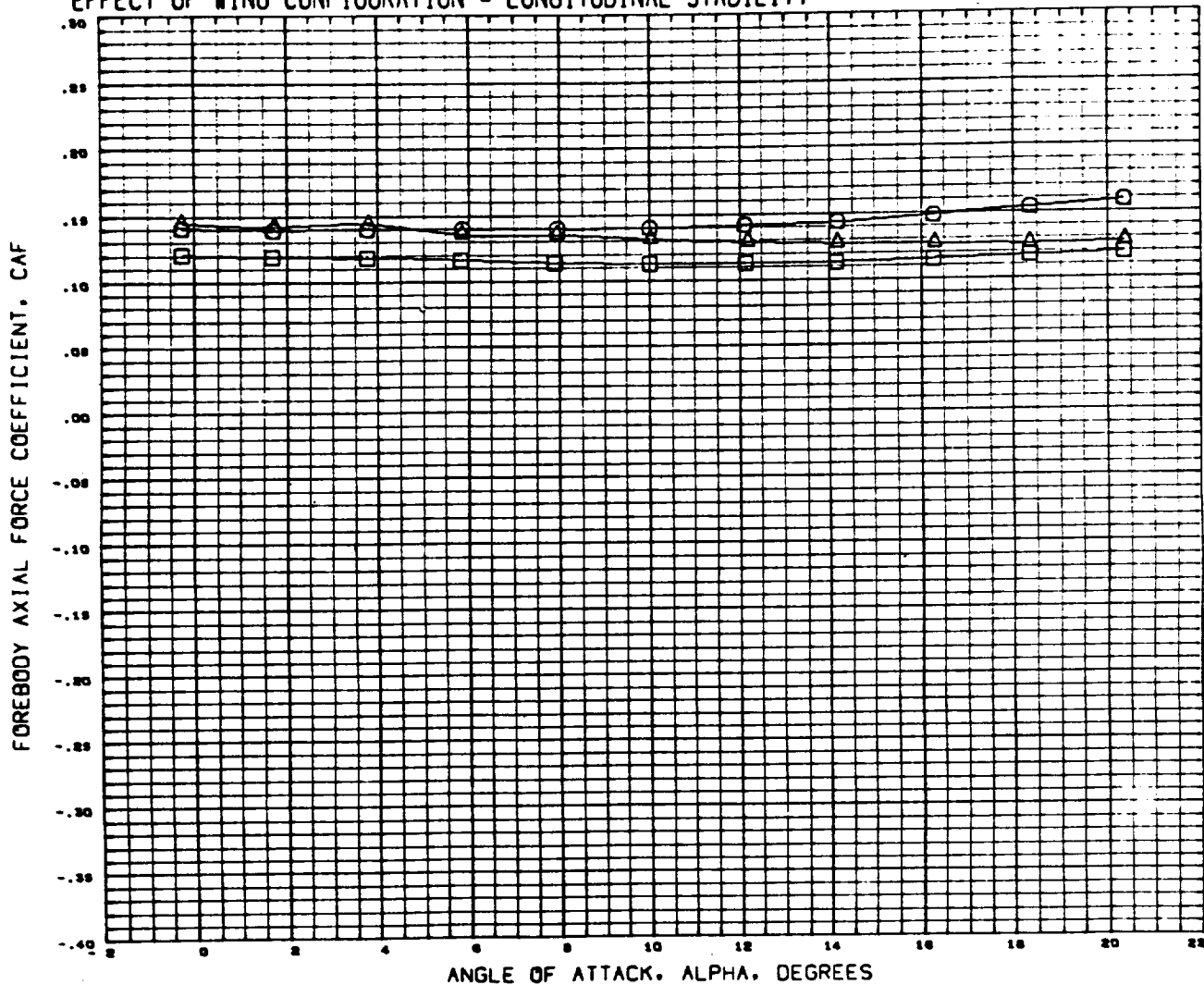
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(G3837A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(G3829A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

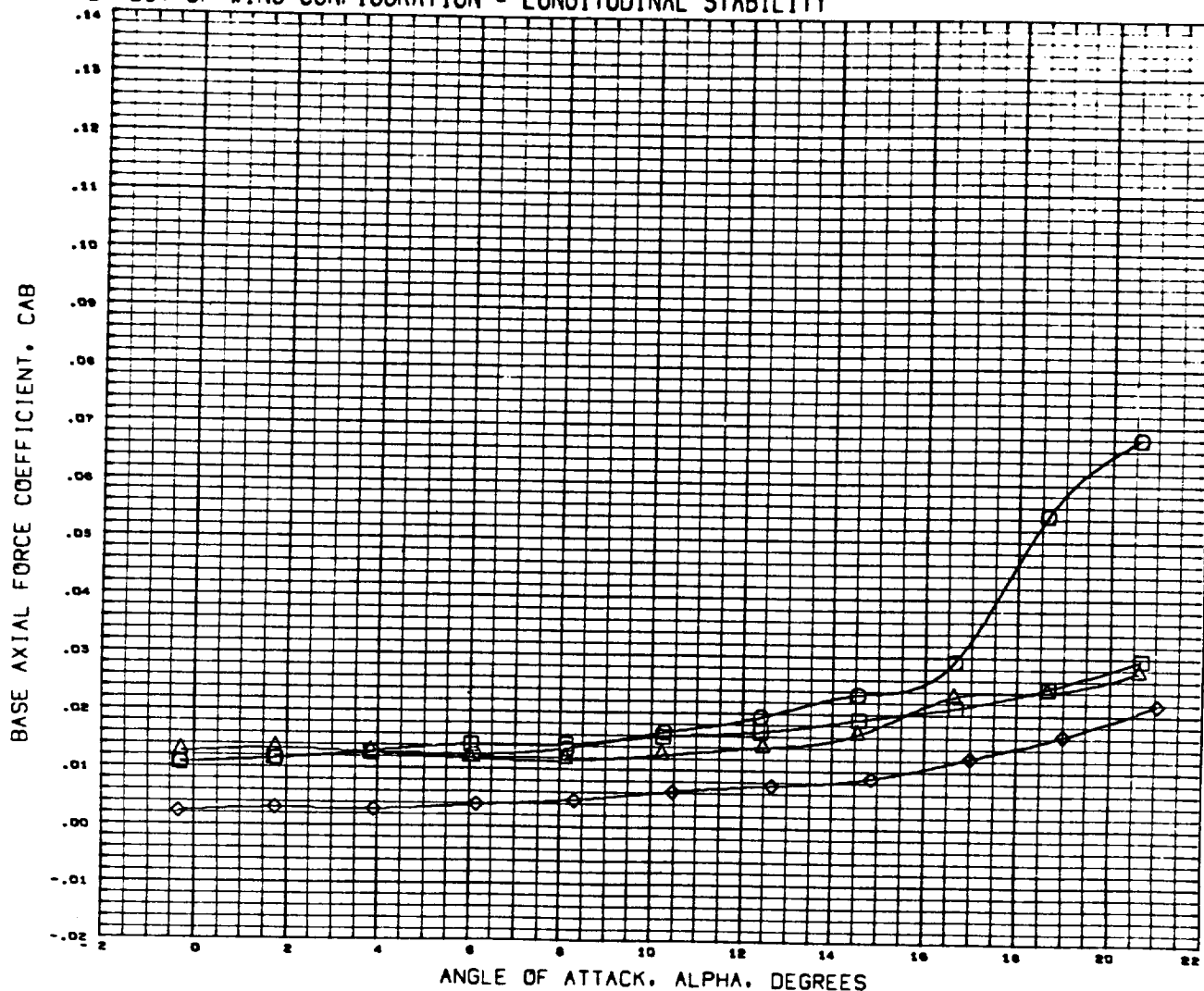
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3917A)	M496-M5FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3937A)	M496-M5FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3924A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3929A)	M496-M5FC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	

MACH 3.480

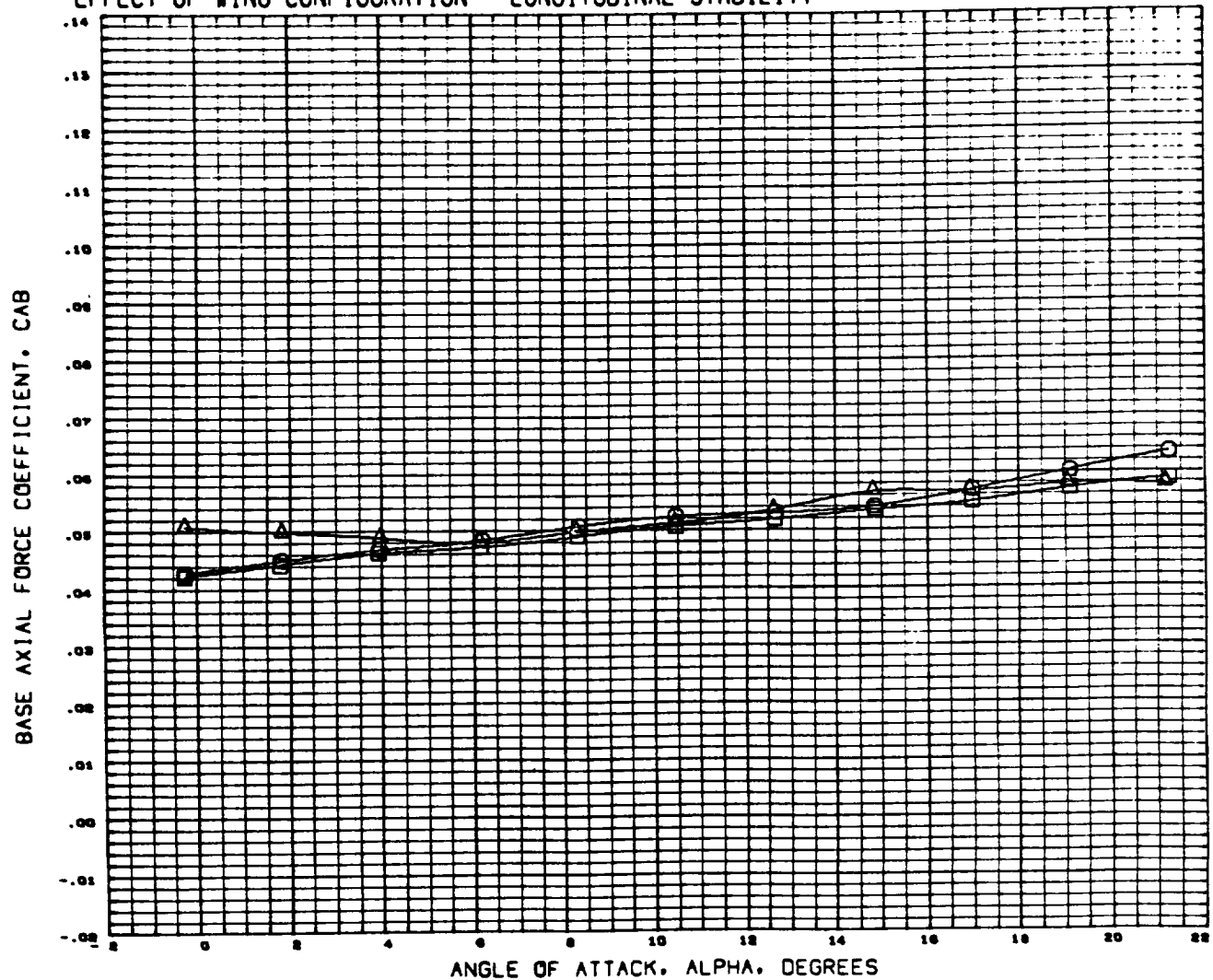
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3637A)	M496-MSFC AR11981-3 MODEL W6H82C12V2	0.000	0.000	0.000	0.000	
(E3624A)	M496-MSFC AR11981-3 MODEL W9B2C12V1	0.000	0.000	0.000	0.000	
(G3629A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 0.598

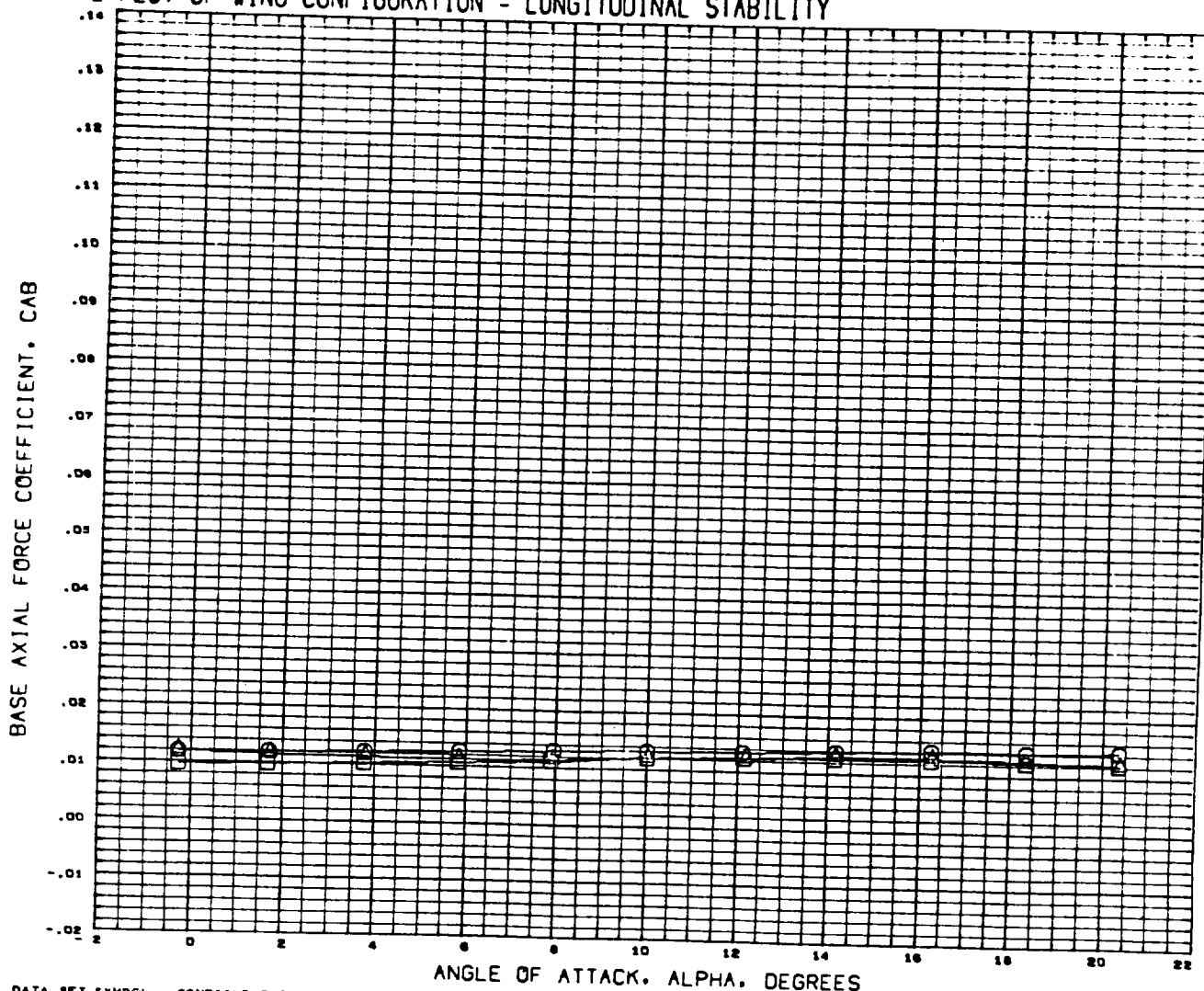
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	N496-HSFC AR11981-3 MODEL W88RC12VR	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	N496-HSFC AR11981-3 MODEL W88RC12VR	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	N496-HSFC AR11981-3 MODEL W88RC12VR	0.000	0.000	0.000	0.000	

MACH 1.197

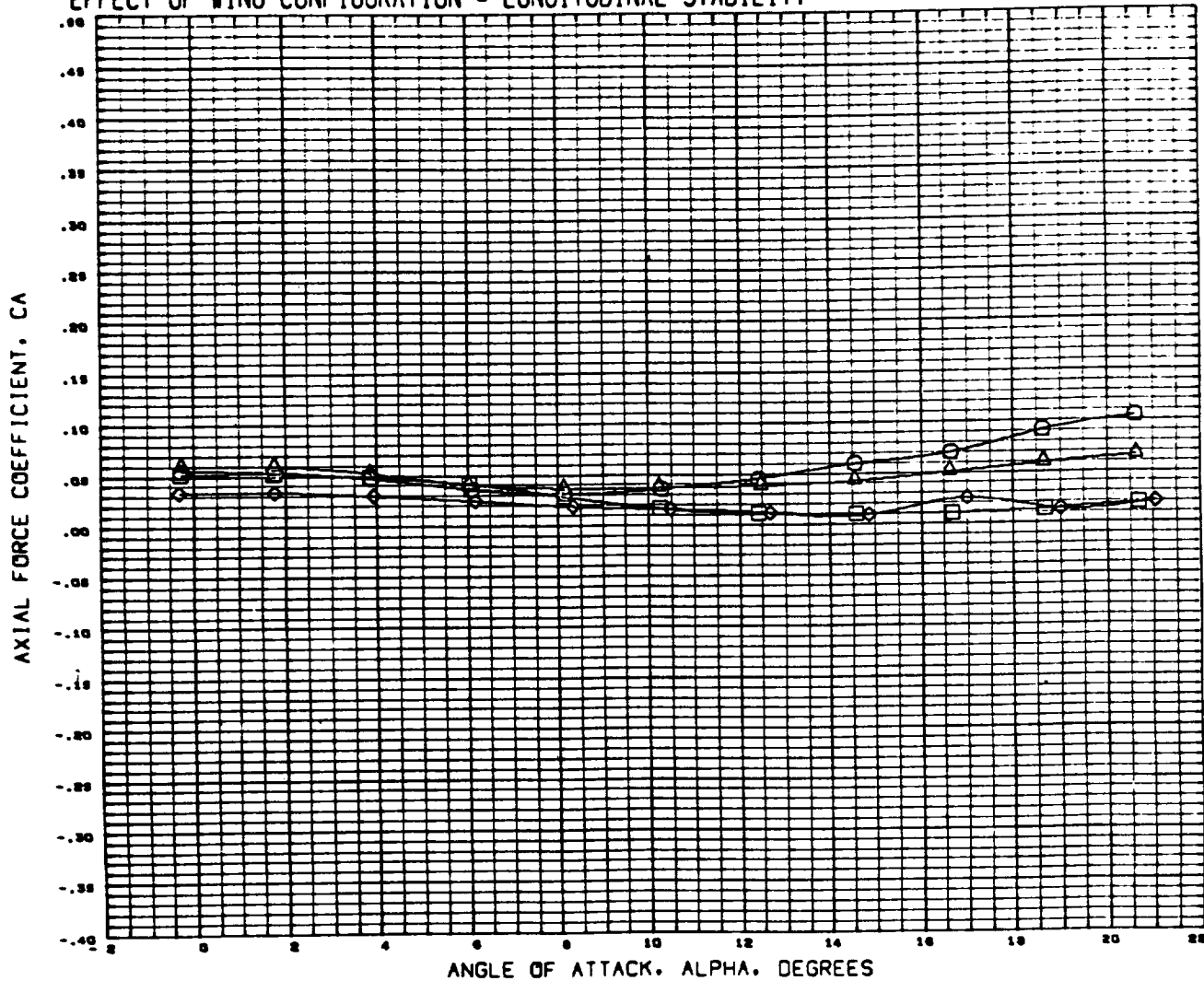
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 3.480

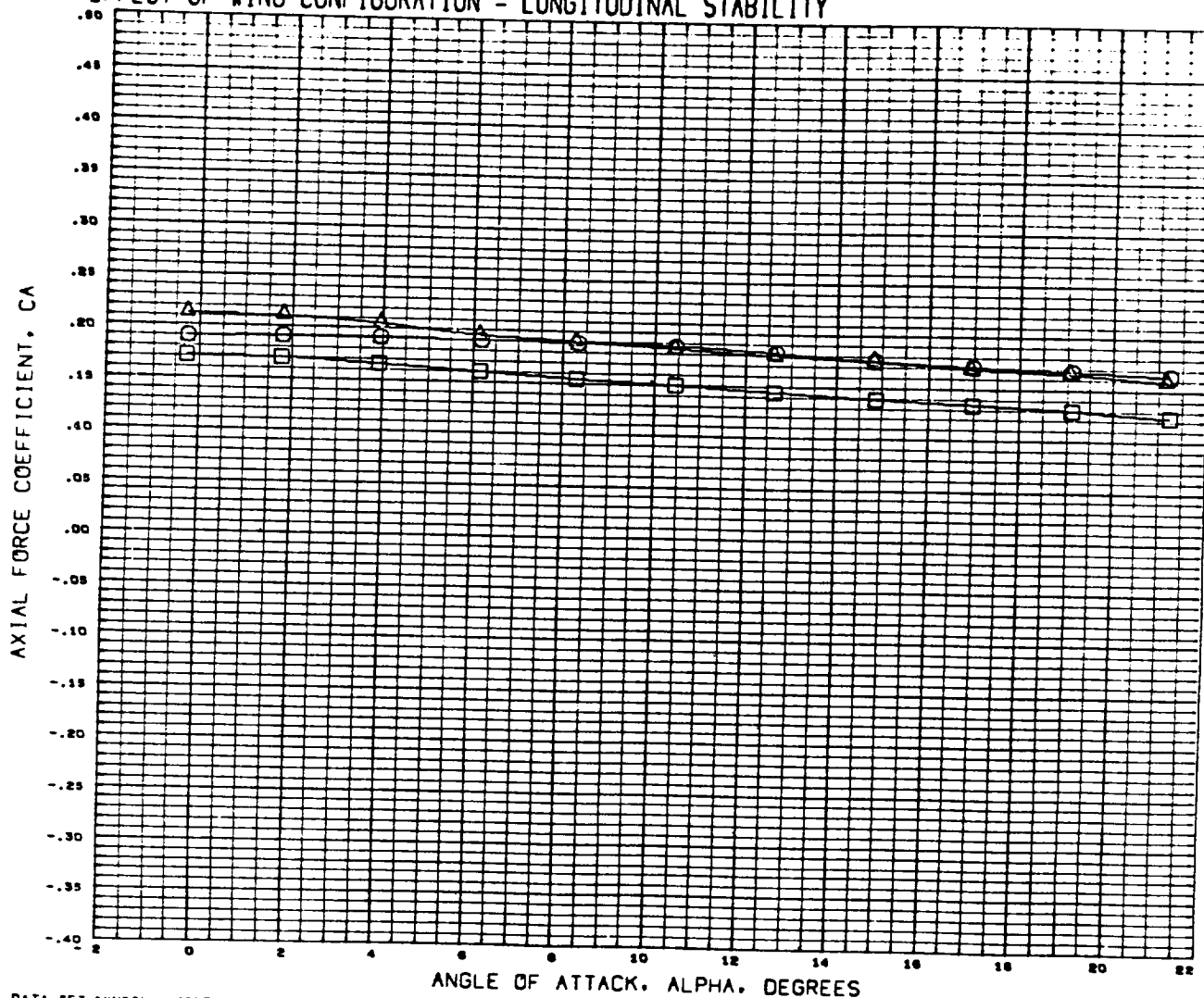
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	M496-HSFC AR11981-3 MODEL W882C12V1	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	M496-HSFC AR11981-3 MODEL W882C12V2	0.000	0.000	0.000	0.000	

MACH 0.998

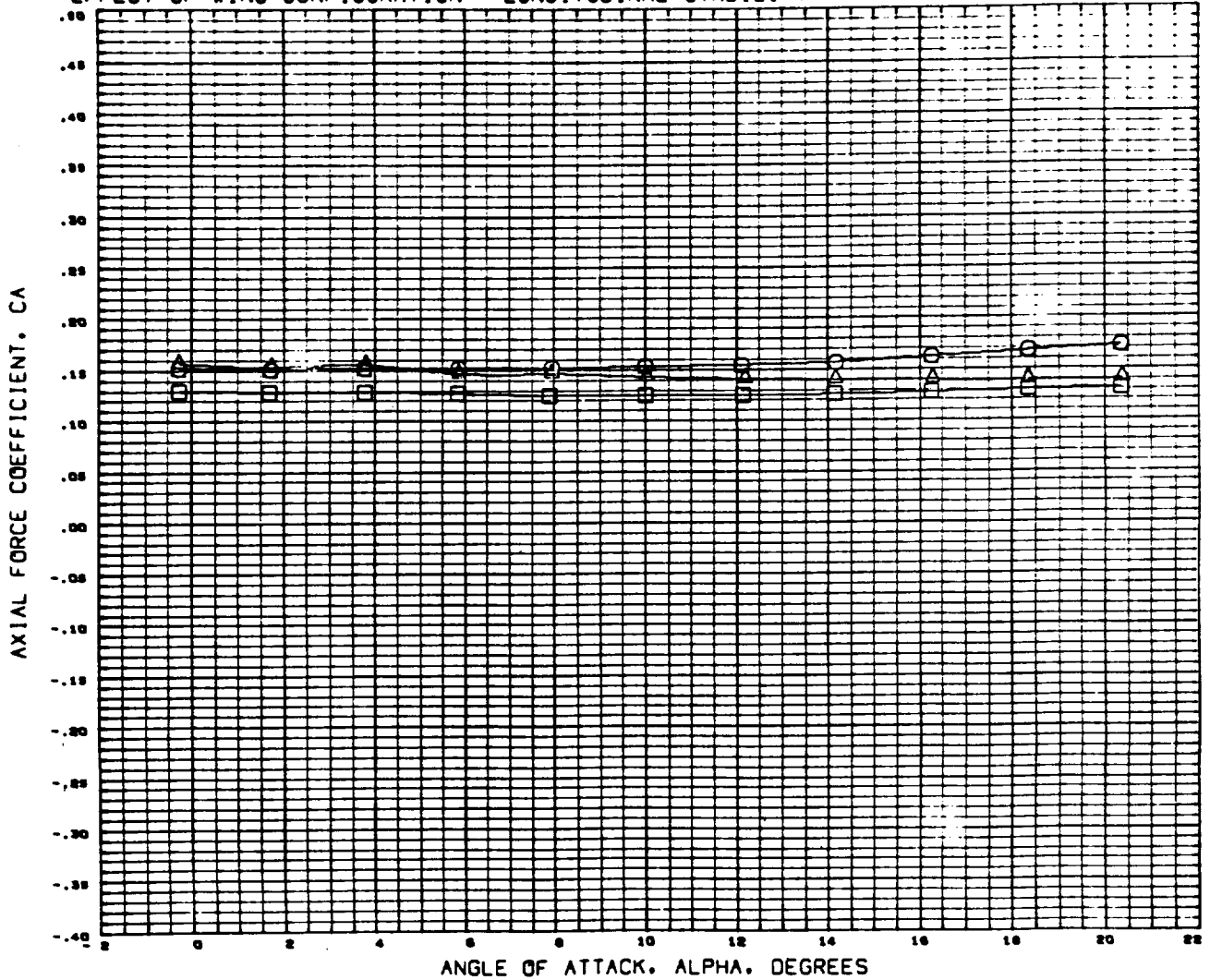
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3824A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3829A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	CHARACTERISTICS

MACH 1.197

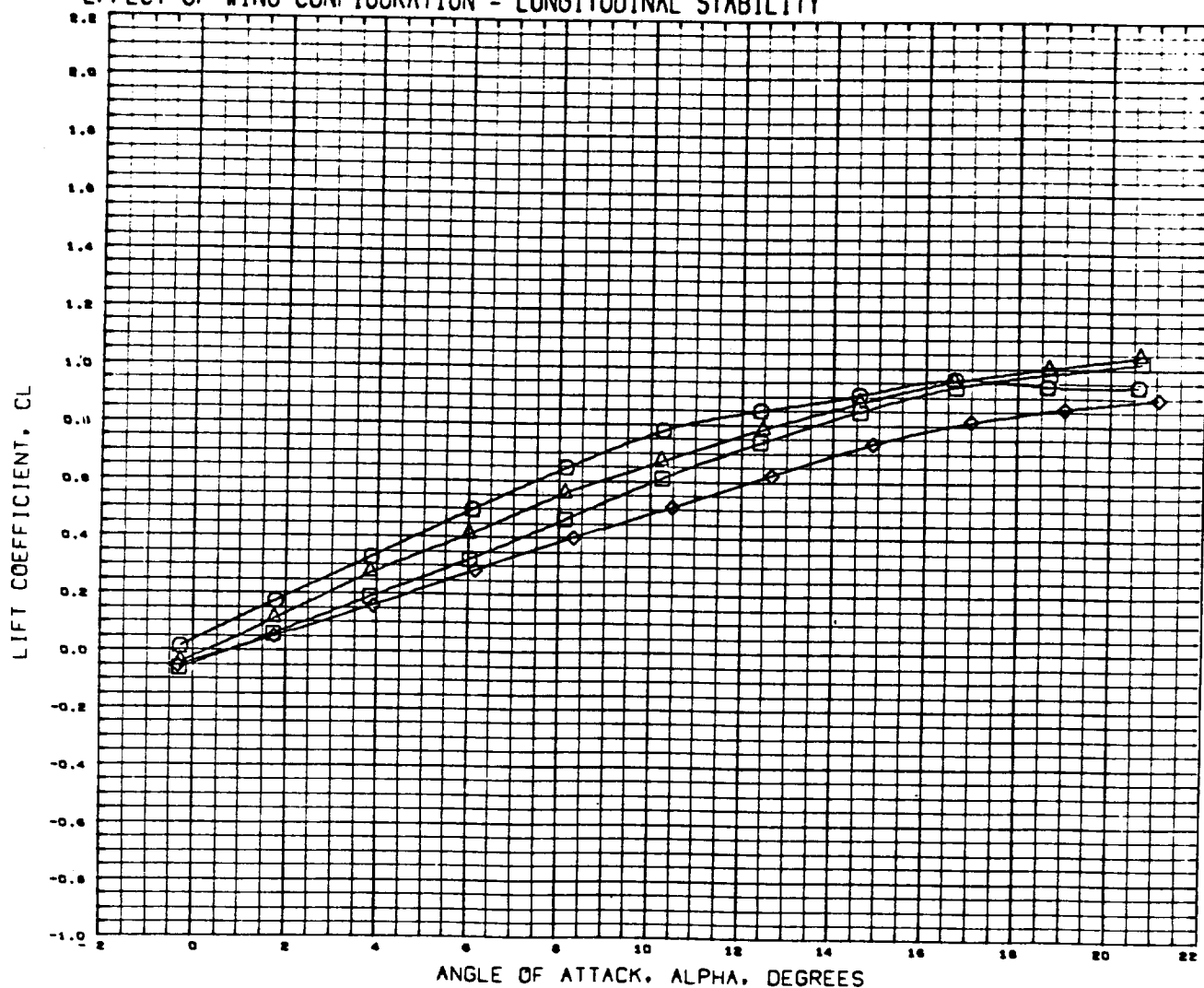
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3017A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3037A)	M496-HSFC AR11981-3 MODEL W6H2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3024A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3029A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	

MACH 3.400

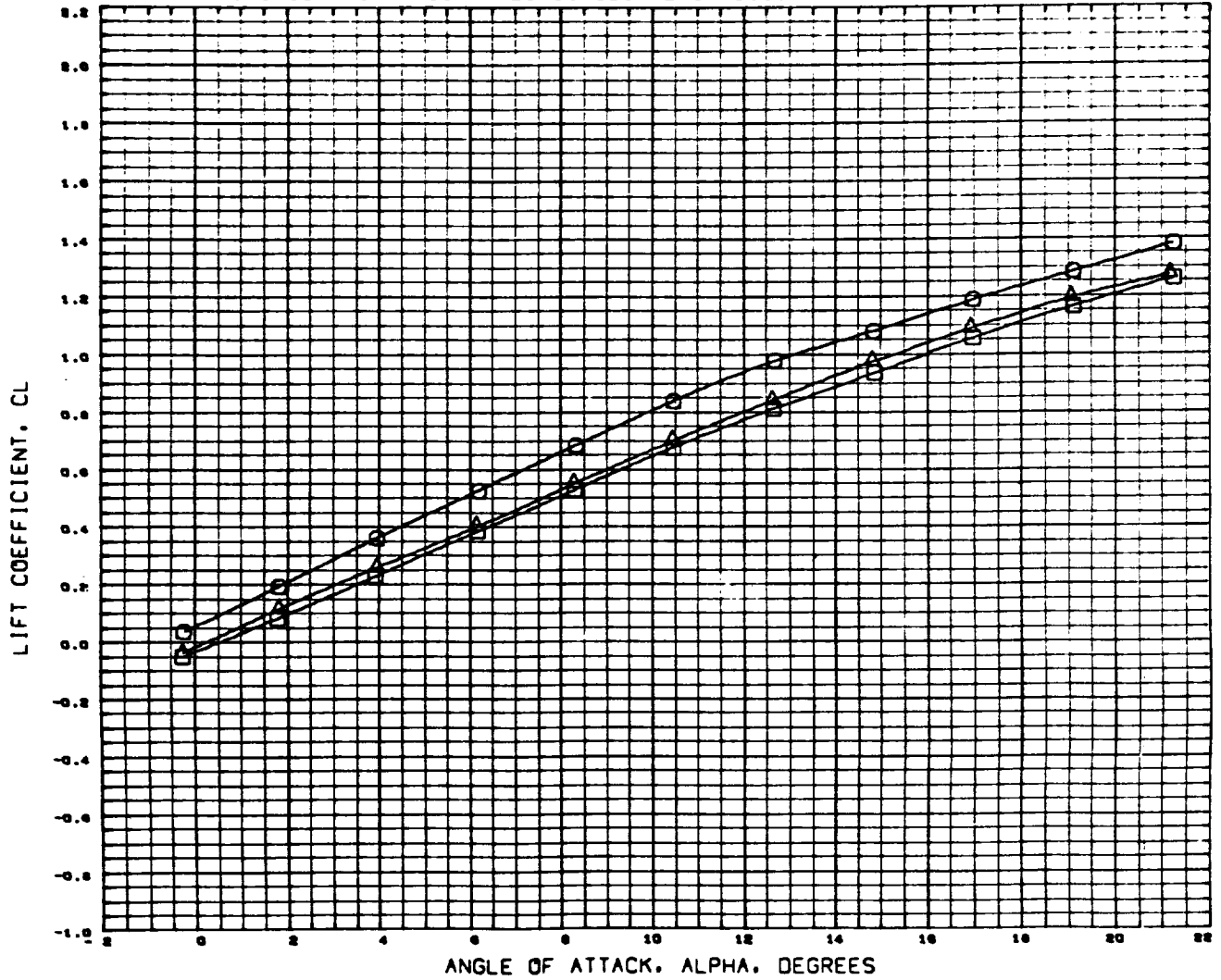
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD
(E3917A)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000
(G3937A)	M496-HSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000
(E3924A)	M496-HSFC AR11981-3 MODEL W9B2C12V1	0.000	0.000	0.000	0.000
(G3929A)	M496-HSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000

MACH 0.596

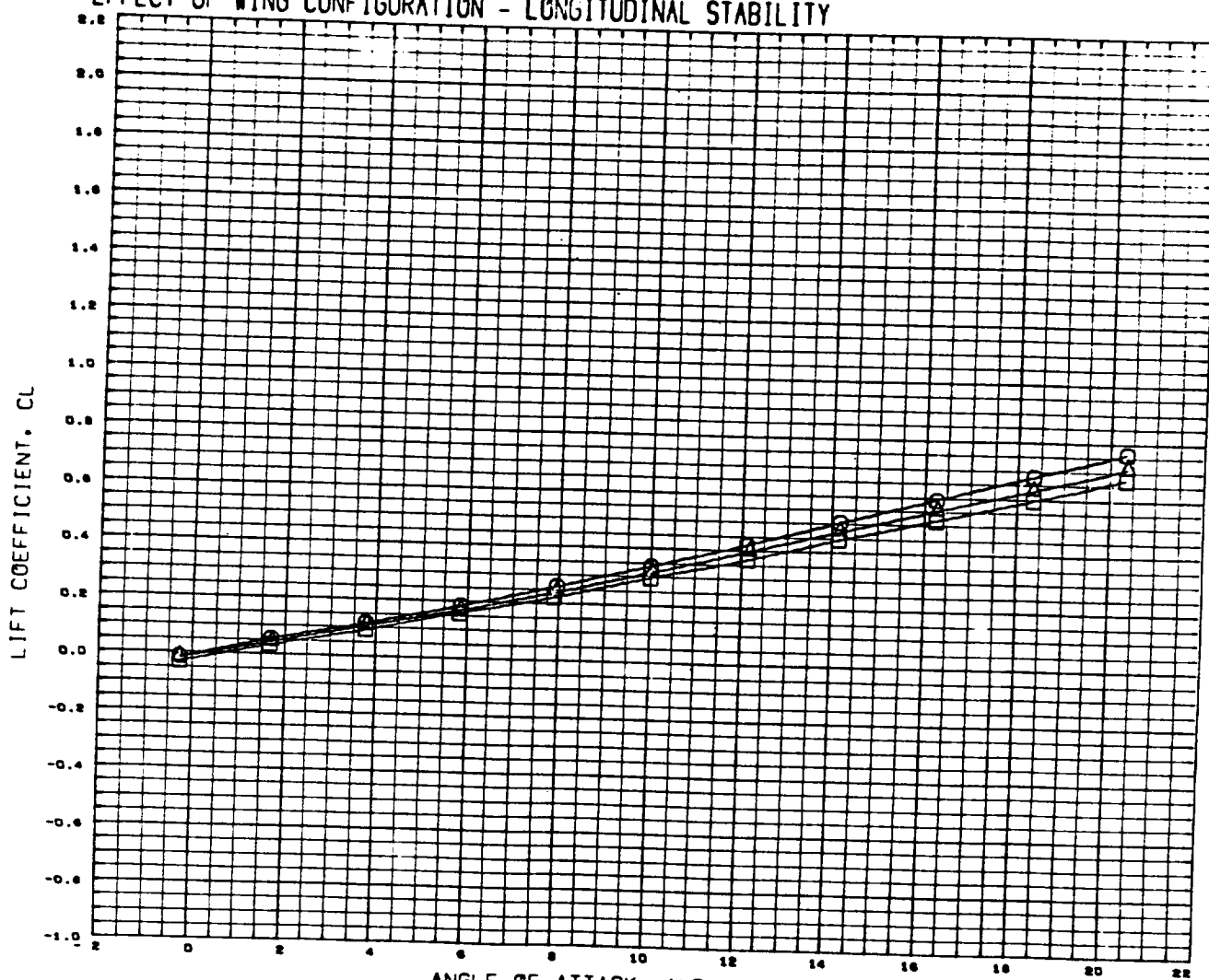
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3017A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3037A)	M496-HSFC AR11981-3 MODEL W6H82C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3024A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3029A)	M496-HSFC AR11981-3 MODEL W482C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

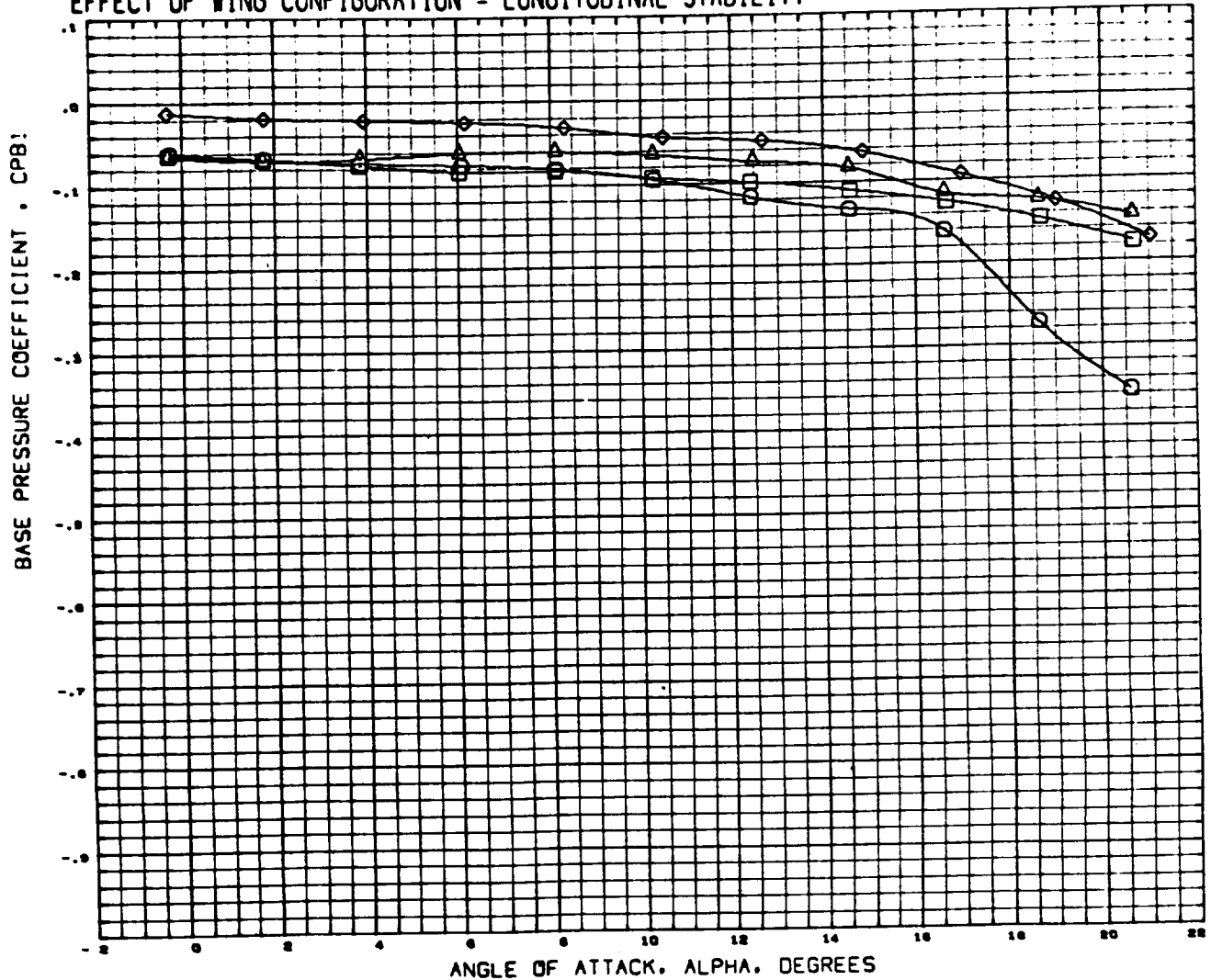
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3837A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(G3829A)	M496-MSFC AR11981-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 3.480

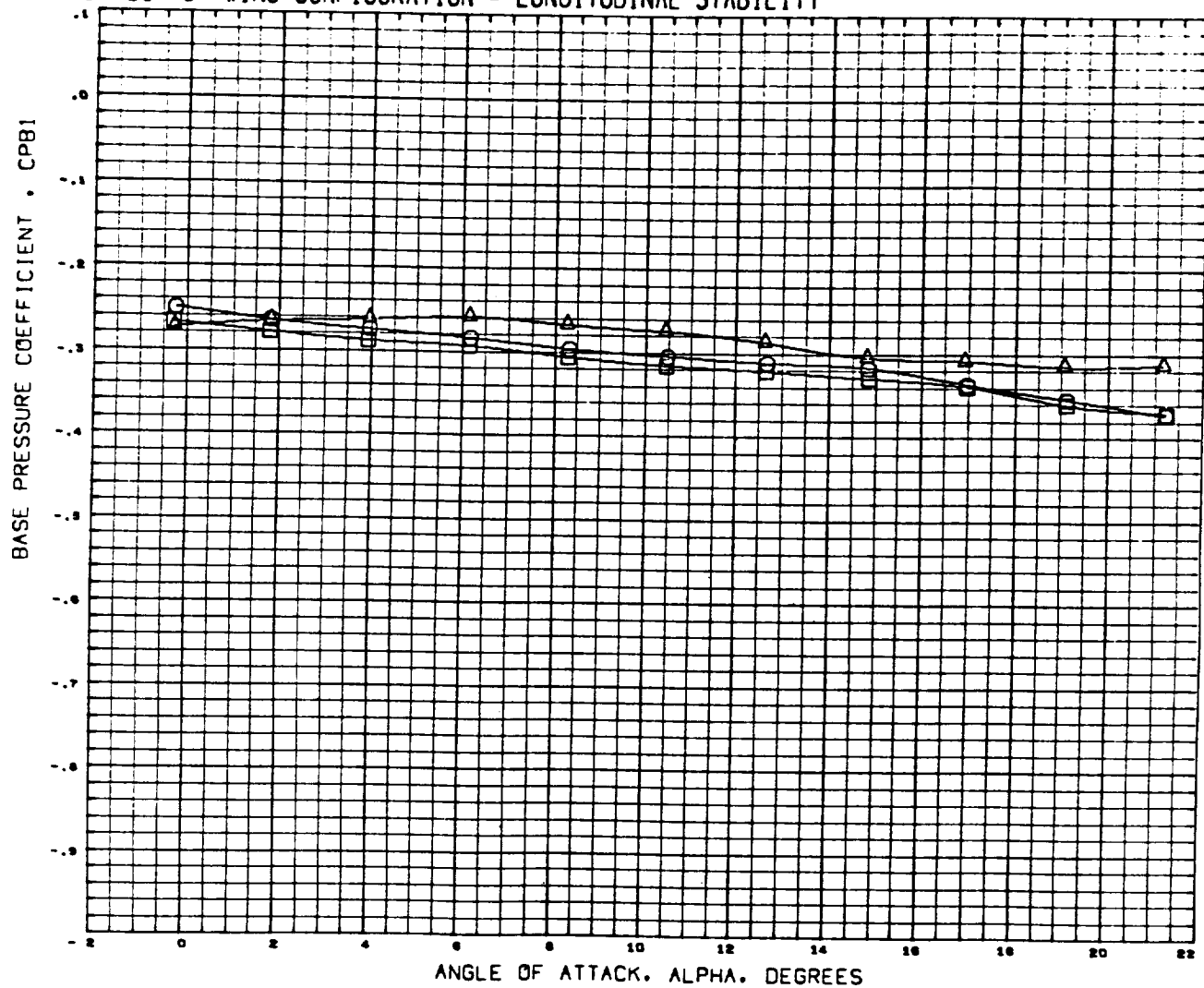
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3637A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	
(E3624A)	M496-HSFC AR11981-3 MODEL W682C12V1	0.000	0.000	0.000	0.000	
(E3629A)	M496-HSFC AR11981-3 MODEL W682C12V2	0.000	0.000	0.000	0.000	

MACH 0.598

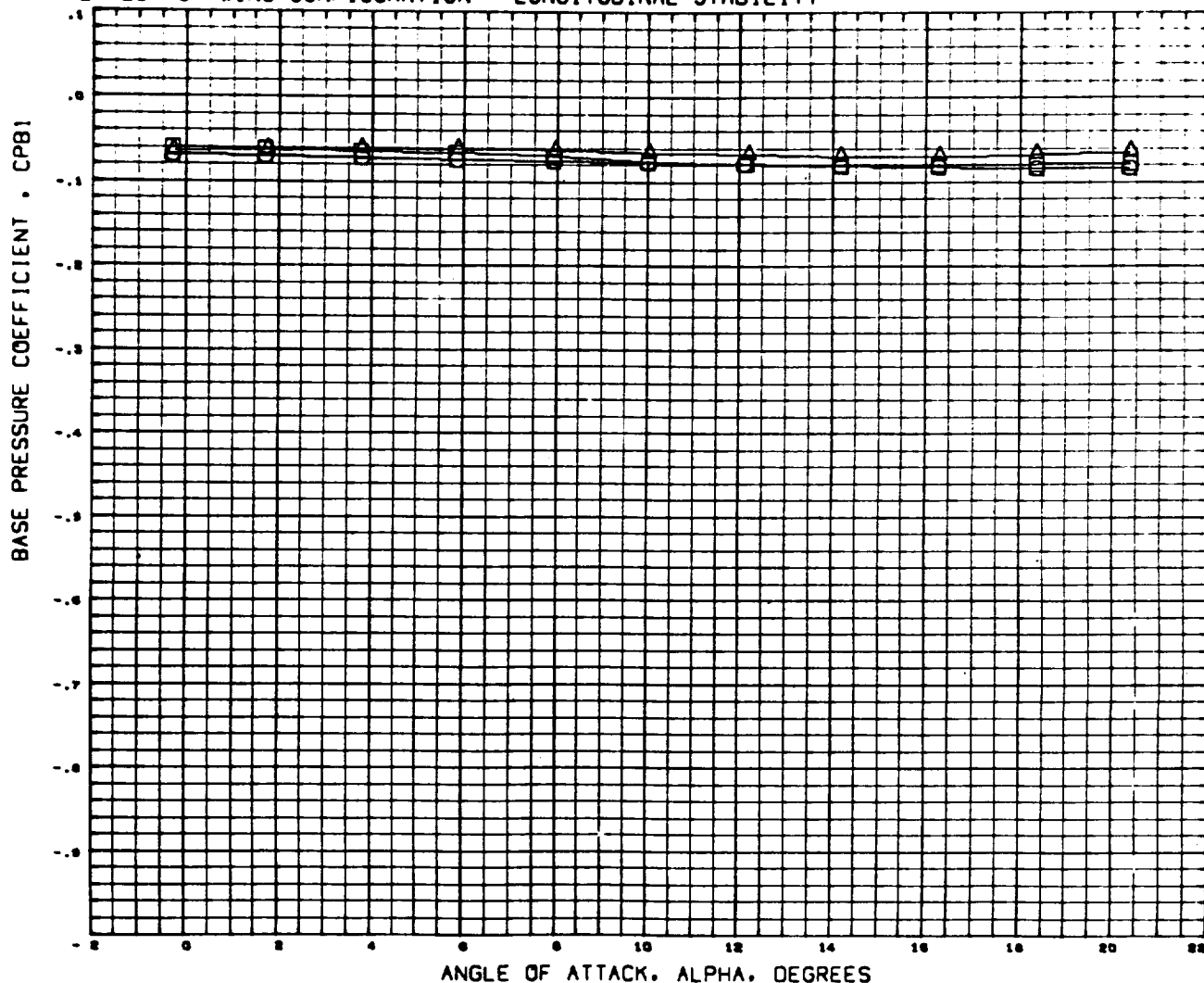
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION				BETA	ELEVTR	AILRON	CANARD	
(E3817A)	○	M496-MSFC	AR11981-3	MODEL	WB82C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3837A)	△	M496-MSFC	AR11981-3	MODEL	WB82C12V2	0.000	0.000	0.000	0.000	
(E3824A)	◇	DATA NOT AVAILABLE FOR ALL CONDITIONS				0.000	0.000	0.000	0.000	
(E3829A)	□	M496-MSFC	AR11981-3	MODEL	WB82C12V2	0.000	0.000	0.000	0.000	

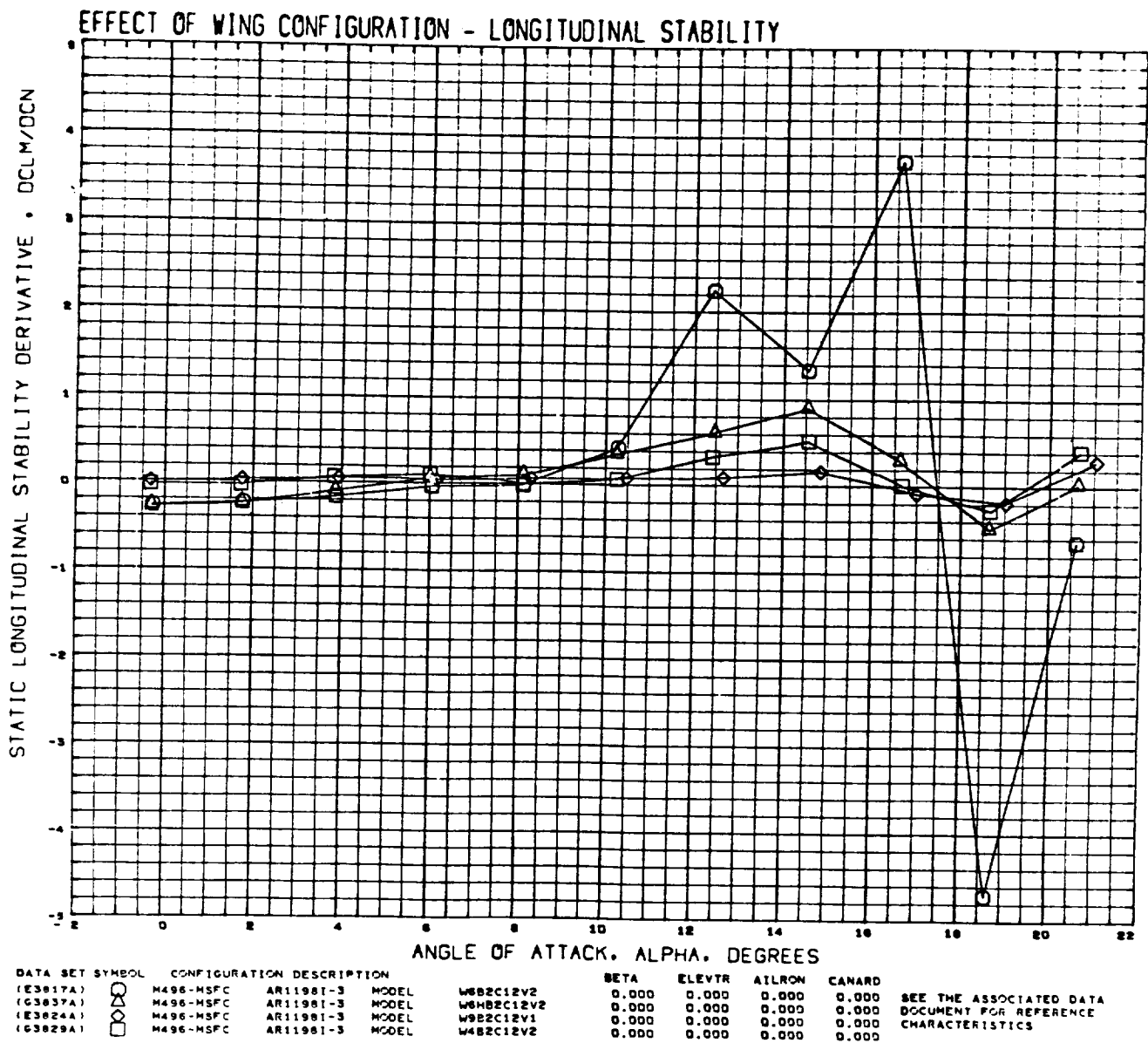
MACH 1.197

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	M496-NSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3637A)	M496-NSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	
(E3624A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(E3629A)	M496-NSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	

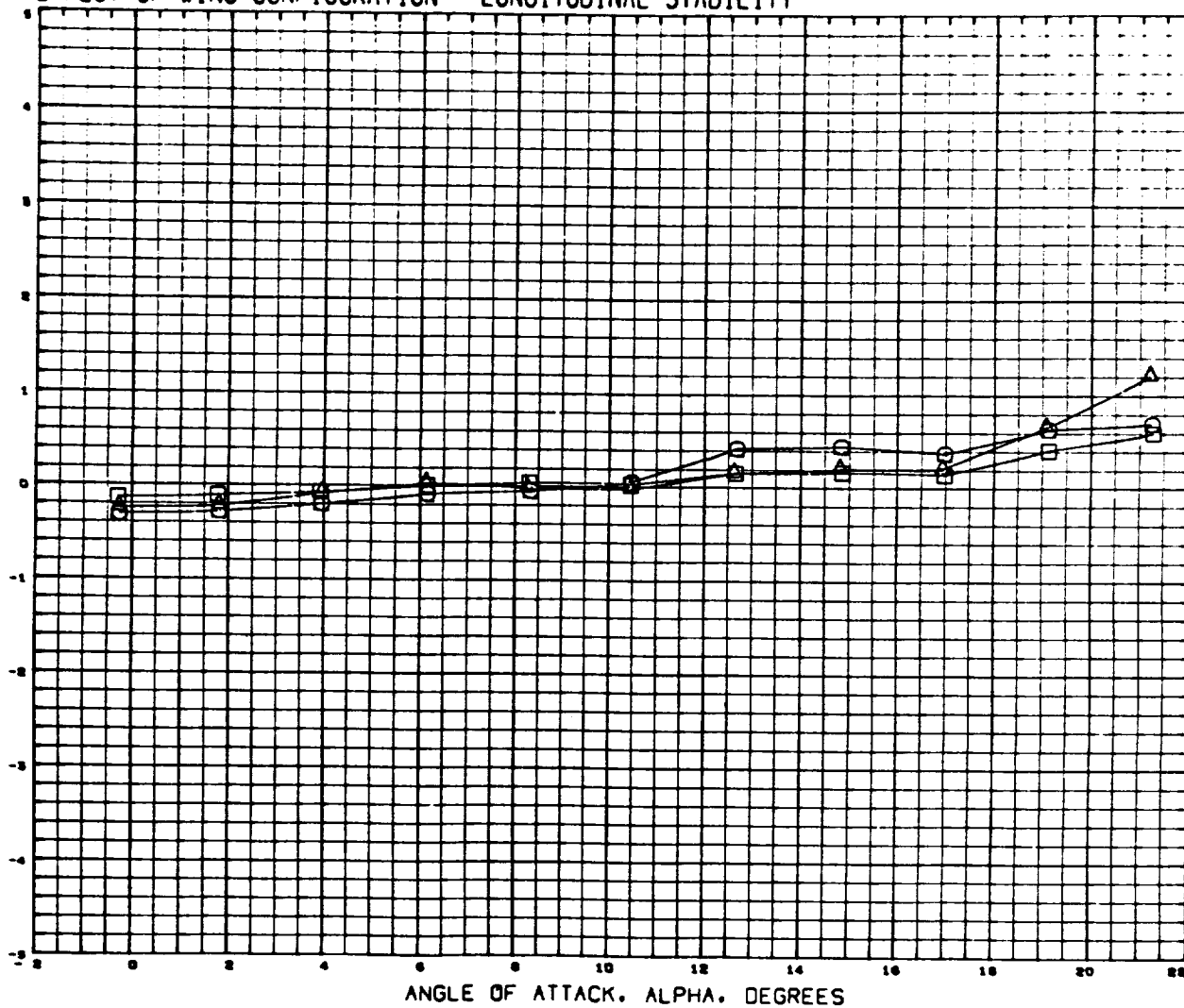
MACH 3.400



MACH 0.998

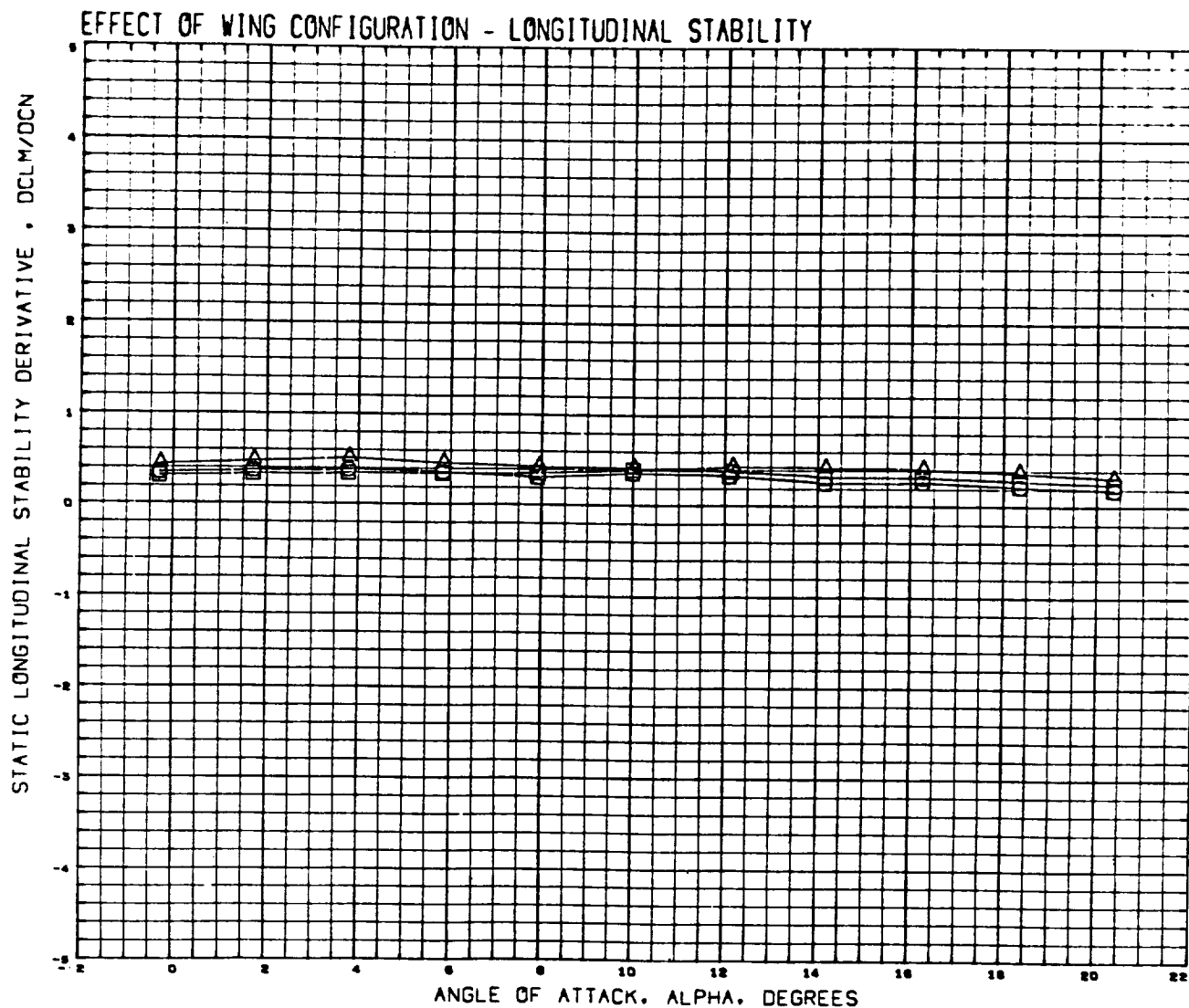
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE, $\frac{dC_{LM}}{d\alpha}$



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E38174)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E38374)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E38244)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E38294)	M496-HSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	

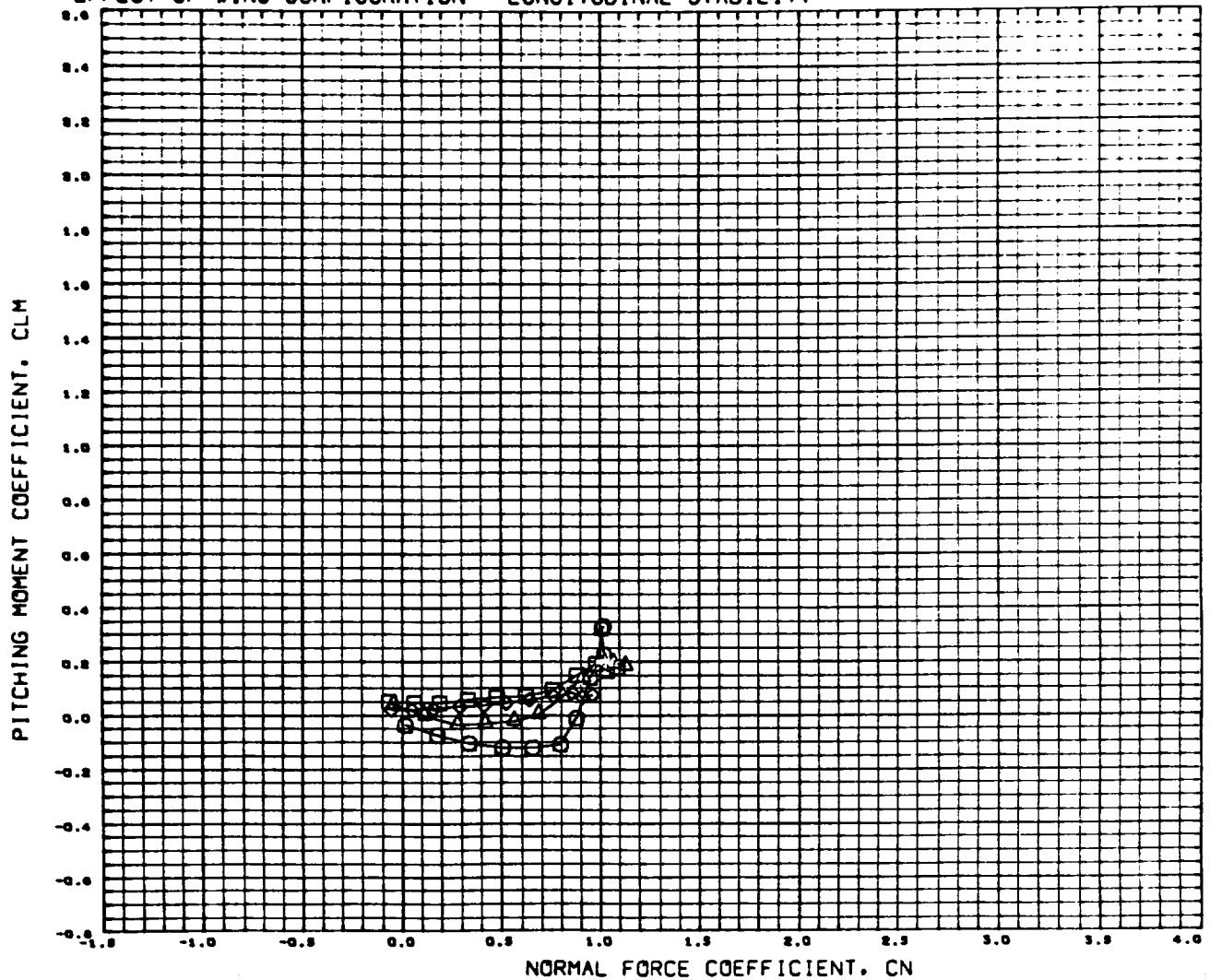
MACH 1.197



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC ARI1981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3837A)	M496-MSFC ARI1981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(G3829A)	M496-MSFC ARI1981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	

MACH 5.480

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-HSFC AR11981-3 MOEL W882C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA
(E3837A)	M496-HSFC AR11981-3 MOEL W882C12V2	0.000	0.000	0.000	0.000	DOCUMENT FOR REFERENCE
(E3824A)	M496-HSFC AR11981-3 MOEL W882C12V1	0.000	0.000	0.000	0.000	CHARACTERISTICS
(E3829A)	M496-HSFC AR11981-3 MOEL W882C12V2	0.000	0.000	0.000	0.000	

MACH 0.598

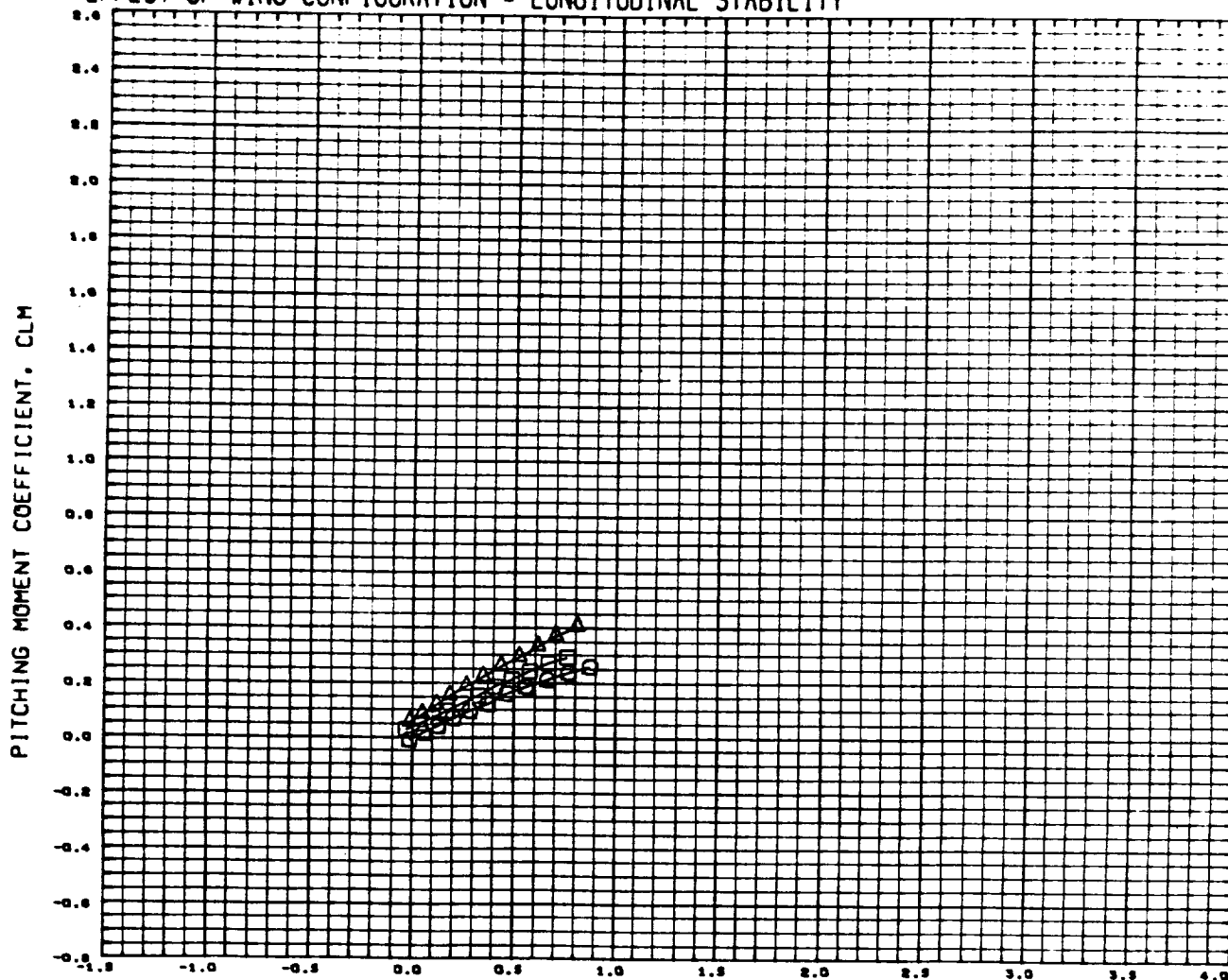
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3837A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(G3829A)	M496-MSFC AR11981-3 MODEL W6B2C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

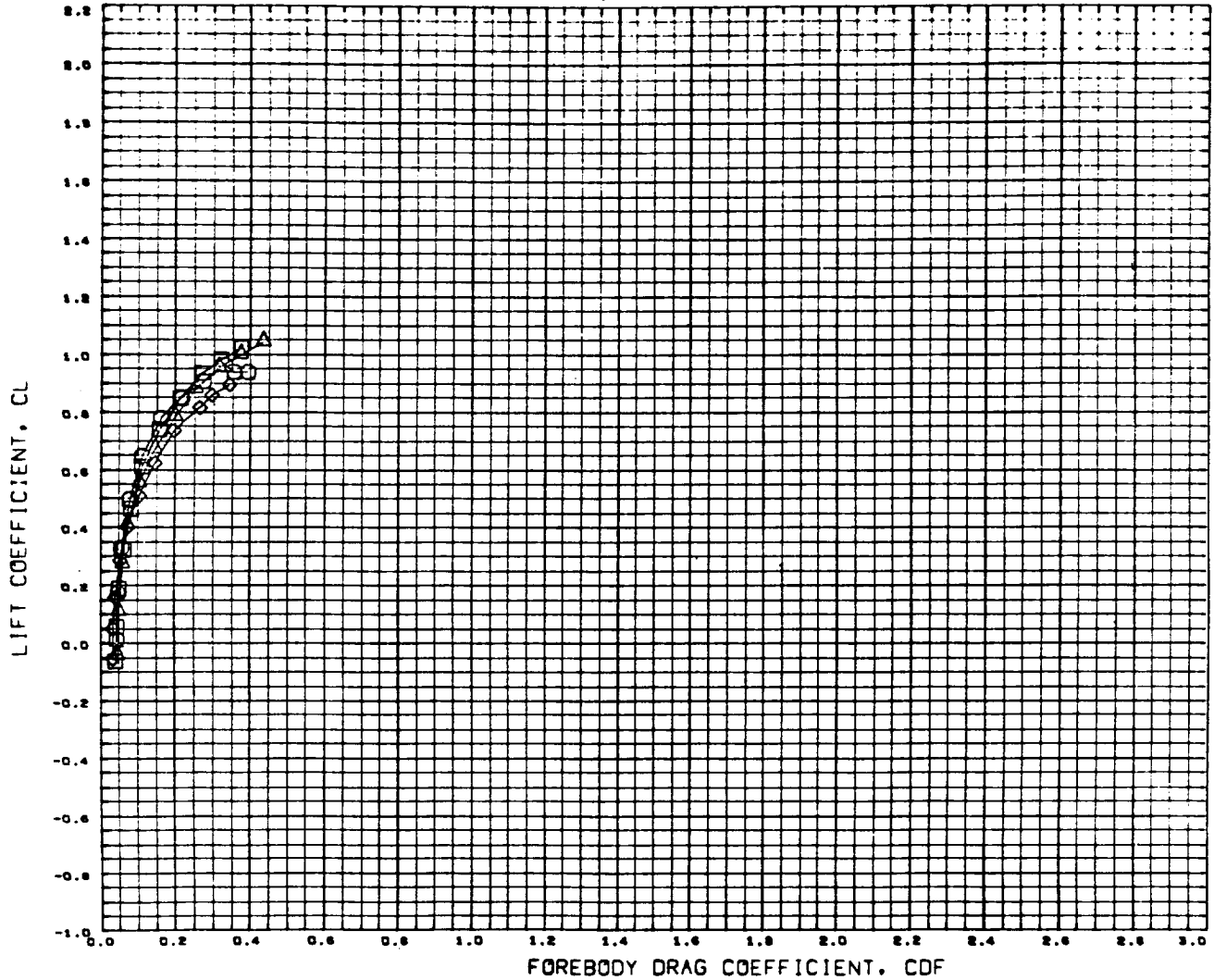
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



		NORMAL FORCE COEFFICIENT, CN							
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION				BETA	ELEVTR	AILRON	CANARD
(E3017A)	○	M496-HSFC	AR11901-3	MODEL	W6B2C12V2	0.000	0.000	0.000	0.000
(E3037A)	△	M496-HSFC	AR11901-3	MODEL	W6B2C12V2	0.000	0.000	0.000	0.000
(E3024A)	◇	DATA NOT AVAILABLE FOR ALL CONDITIONS				0.000	0.000	0.000	0.000
(E3029A)	□	M496-HSFC	AR11901-3	MODEL	W6B2C12V2	0.000	0.000	0.000	0.000

MACH 3.400

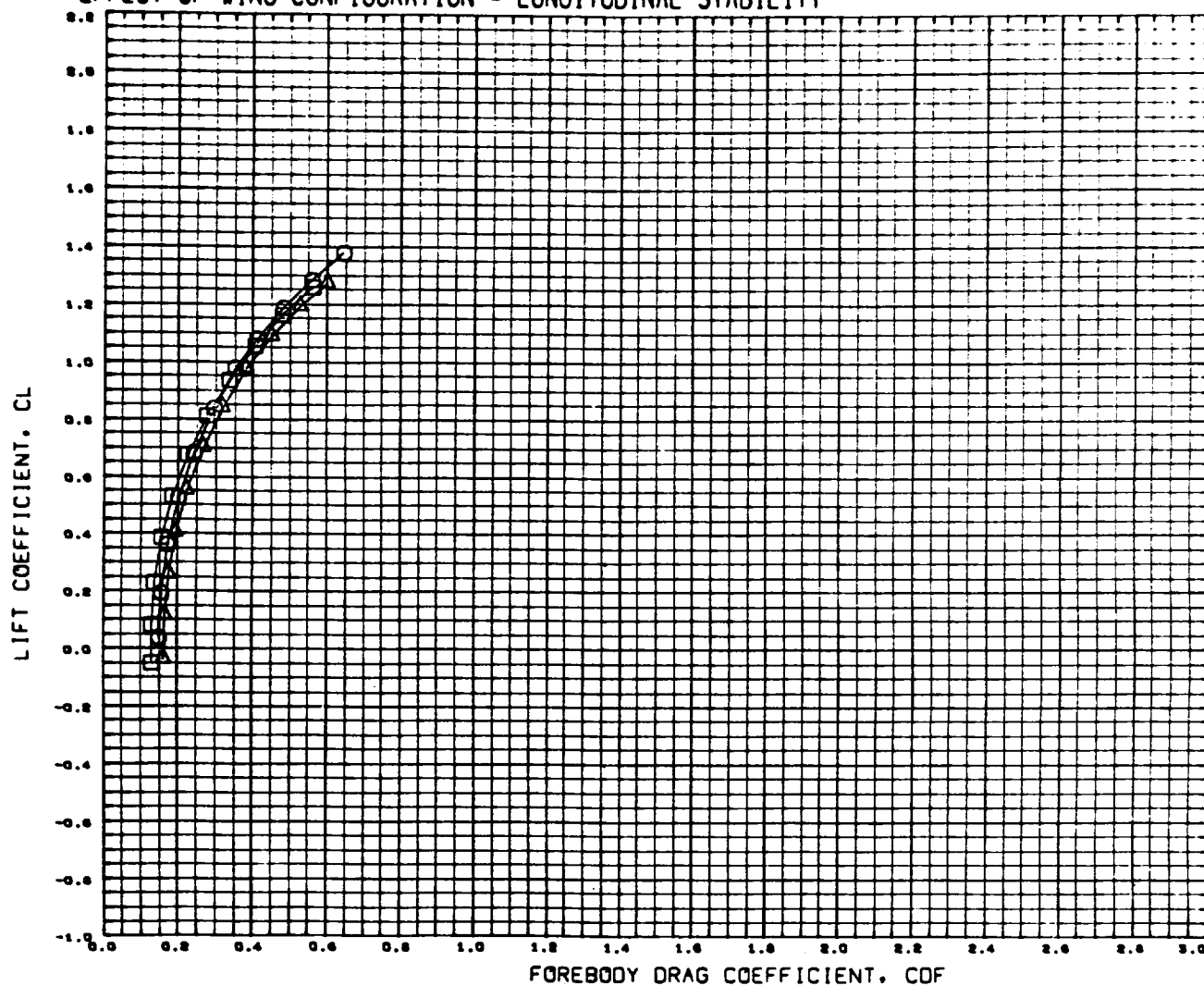
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MOCEL W882C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(G3837A)	M496-MSFC AR11981-3 MOCEL W882C12V2	0.000	0.000	0.000	0.000	
(E3824A)	M496-MSFC AR11981-3 MOCEL W882C12V1	0.000	0.000	0.000	0.000	
(G3829A)	M496-MSFC AR11981-3 MOCEL W882C12V2	0.000	0.000	0.000	0.000	

MACH 0.598

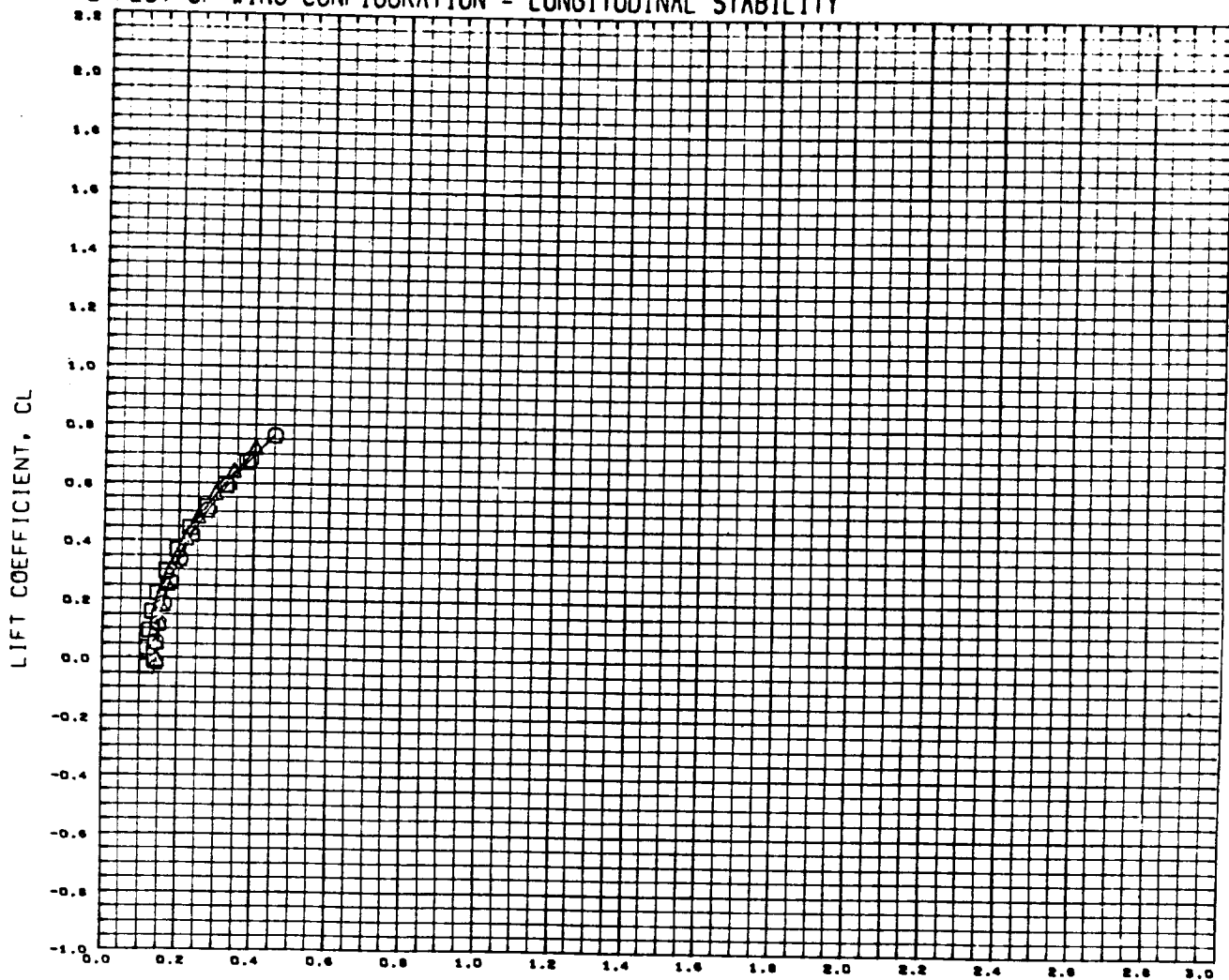
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3617A)	M496-MSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3637A)	M496-MSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	
(E3624A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(E3629A)	M496-MSFC AR11961-3 MODEL W4B2C12V2	0.000	0.000	0.000	0.000	

MACH 1.197

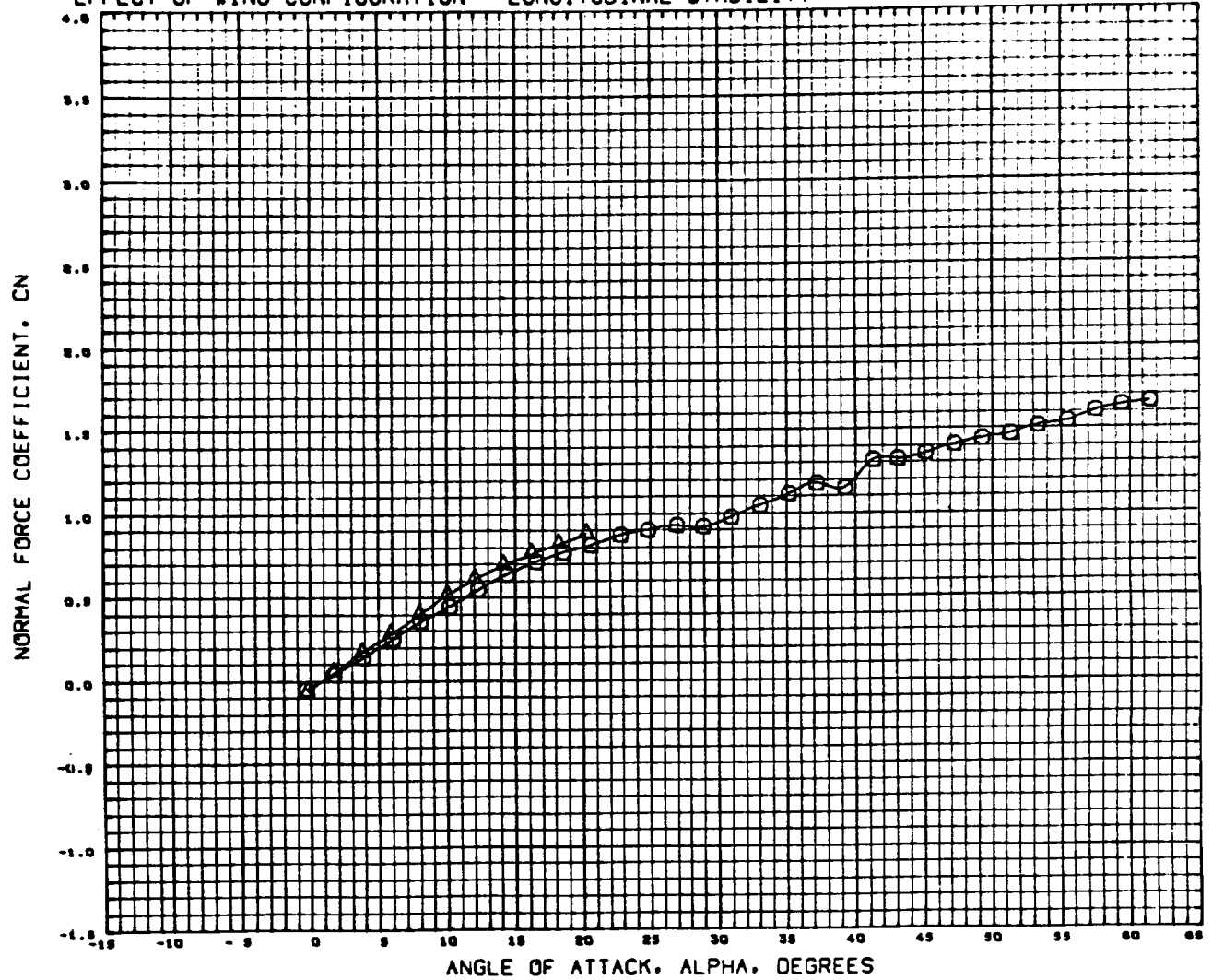
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	CANARD	
(E3817A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(E3837A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	
(E3824A)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	0.000	
(E3829A)	M496-MSFC AR11981-3 MODEL W8B2C12V2	0.000	0.000	0.000	0.000	

MACH 3.485

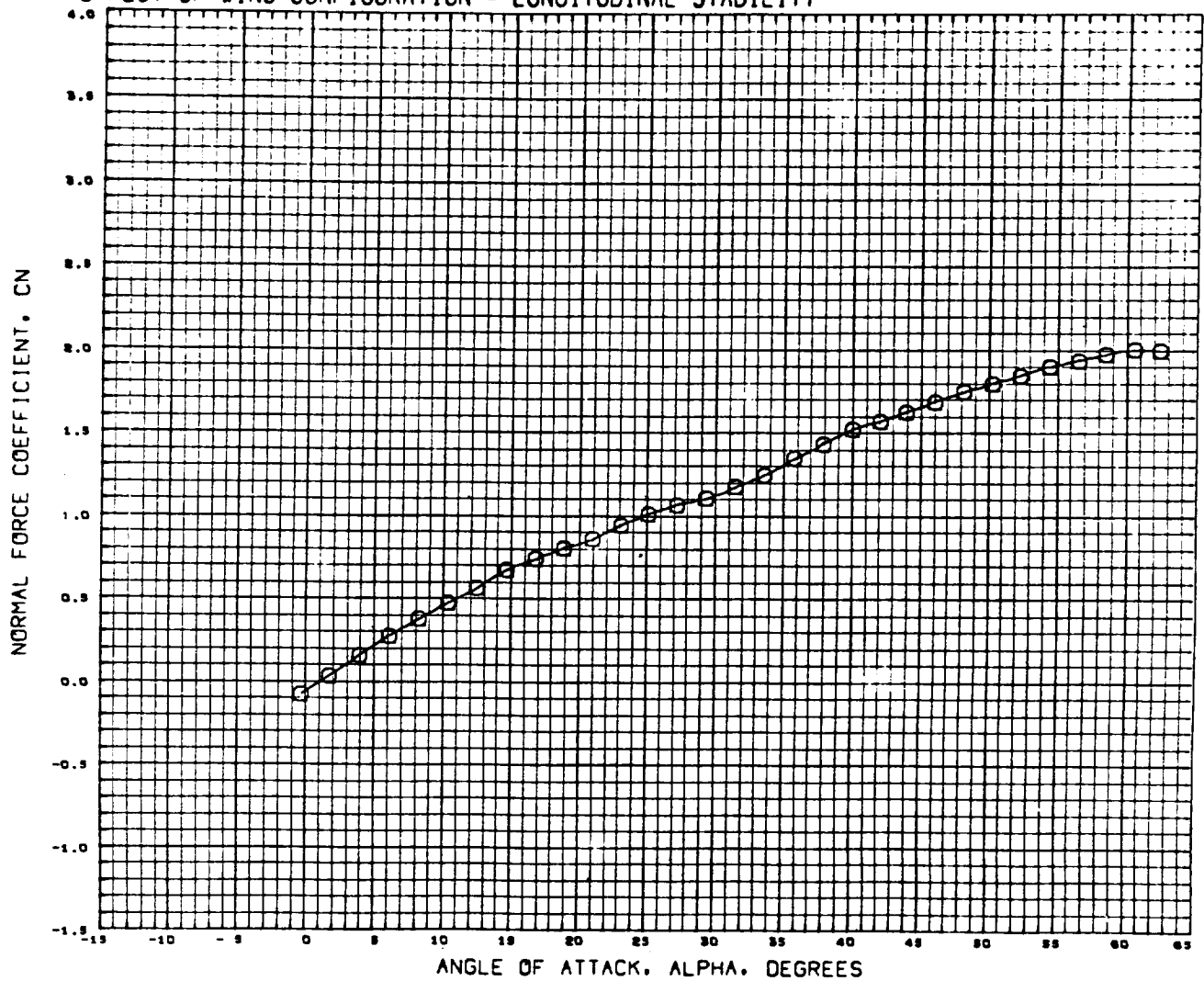
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3023K)	M496-MSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3026K)	M496-MSFC AR11981-3 MODEL W982V2	0.000	0.000	0.000	
(F3009K)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.599

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



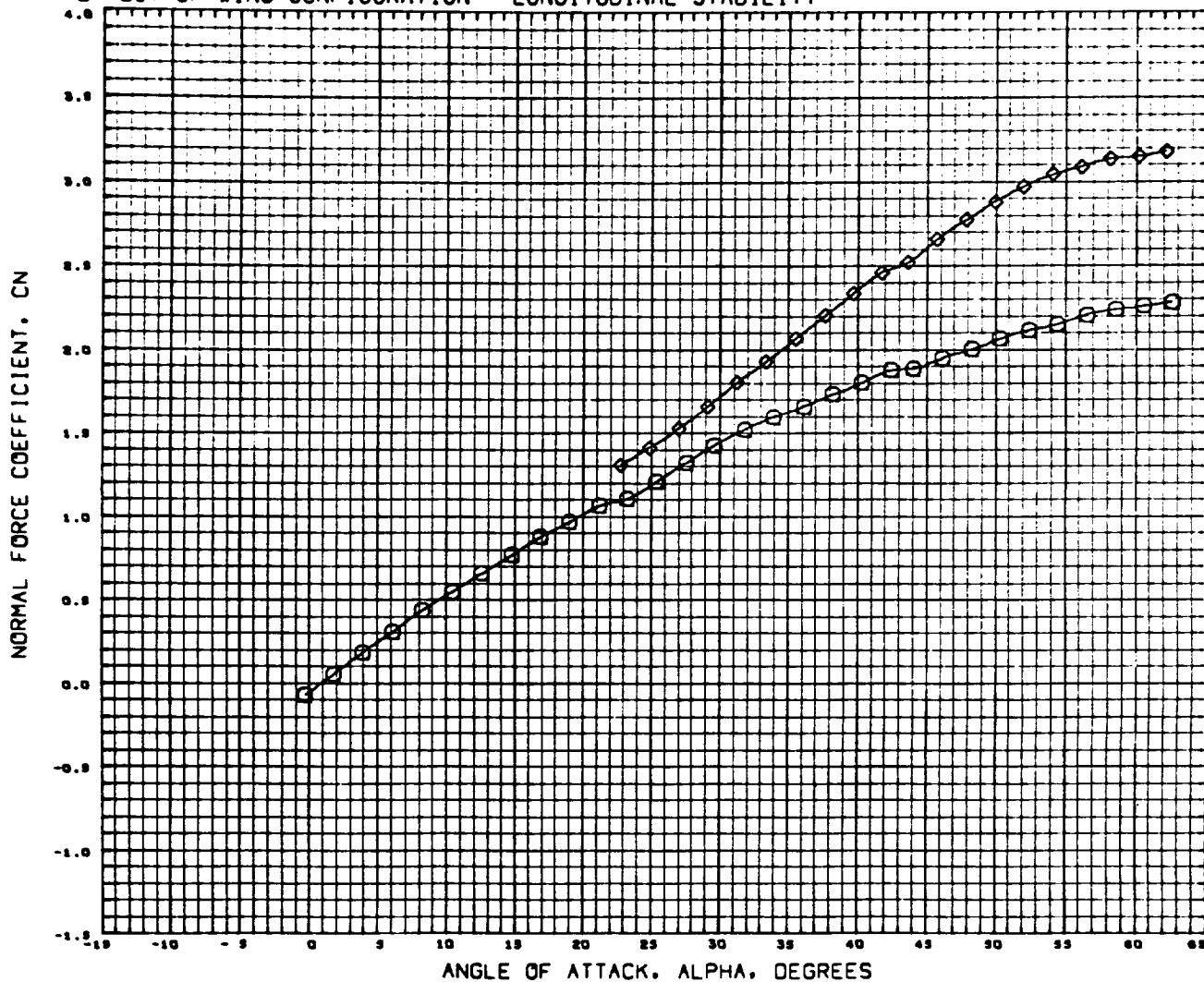
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-MSFC AR11981-3 MODEL W982V1
 (F3826X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

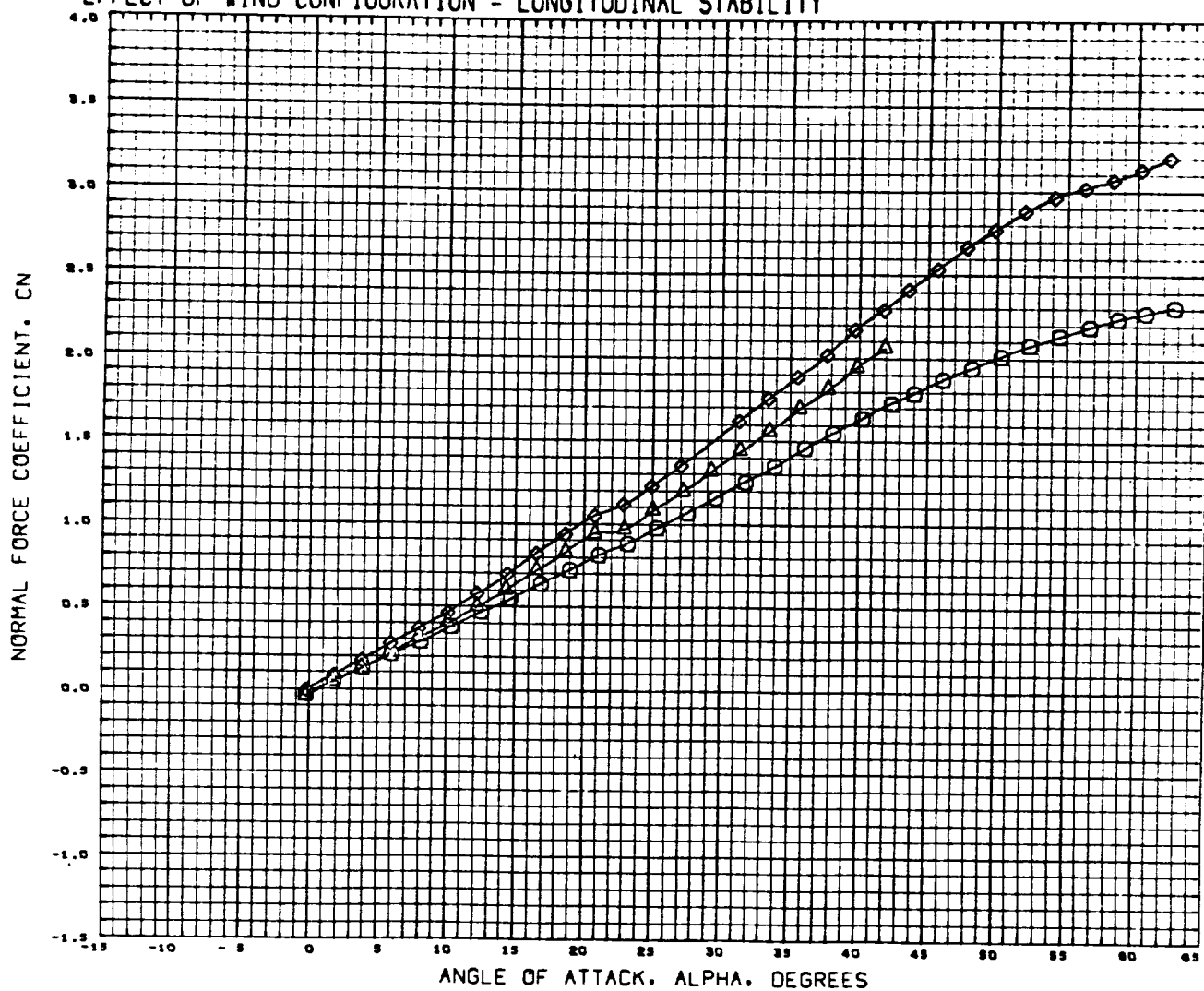
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3823X)	M498-HSPC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3828X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	
(P3809X)	M498-HSPC AR11981-3 MODEL W982V2	0.000	0.000	0.000	

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



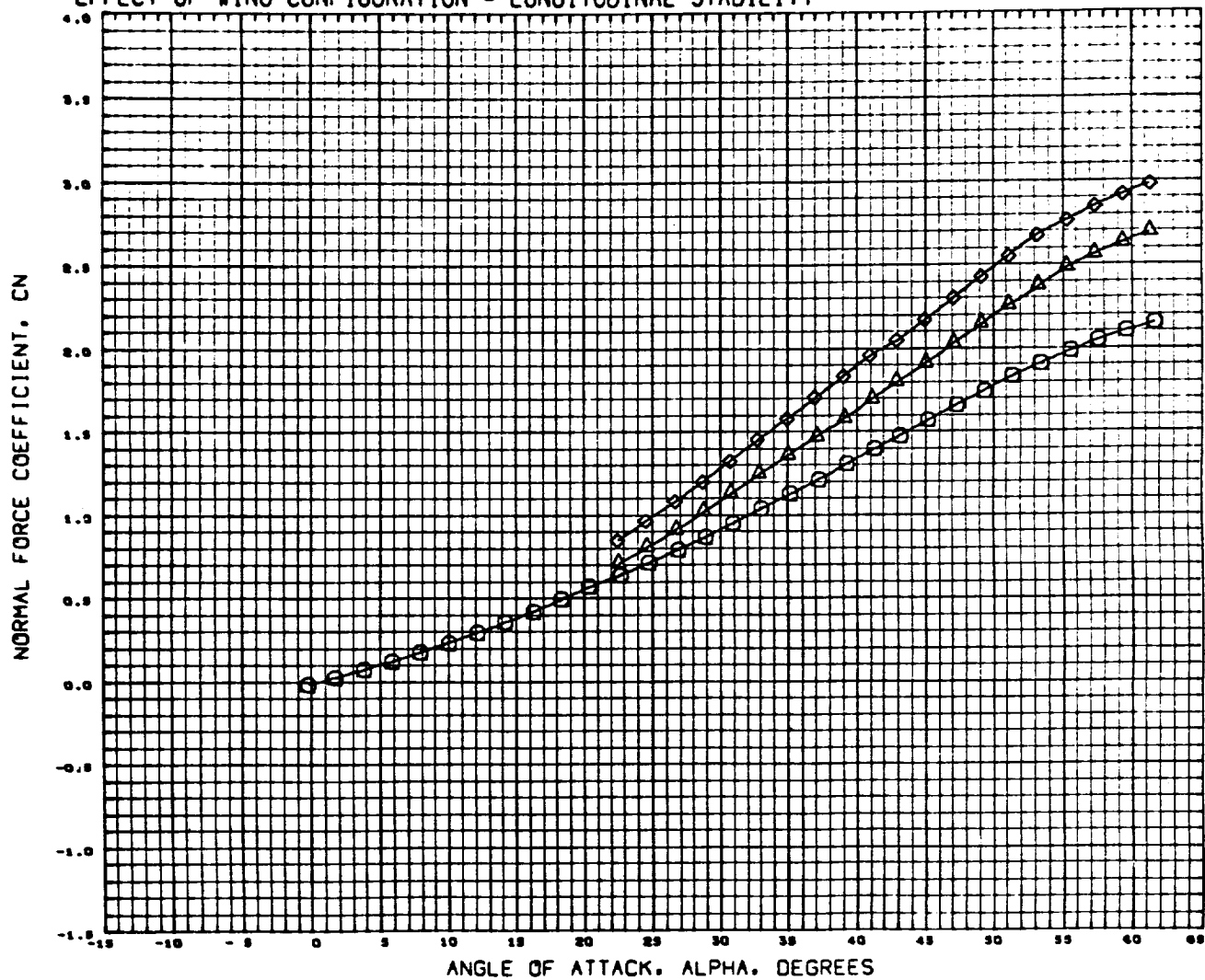
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(F3823X)	M496-MSFC AR11981-3 MODEL W882V1
(F3825X)	M496-MSFC AR11981-3 MODEL W882V2
(F3829X)	M496-MSFC AR11981-3 MODEL W882V2

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

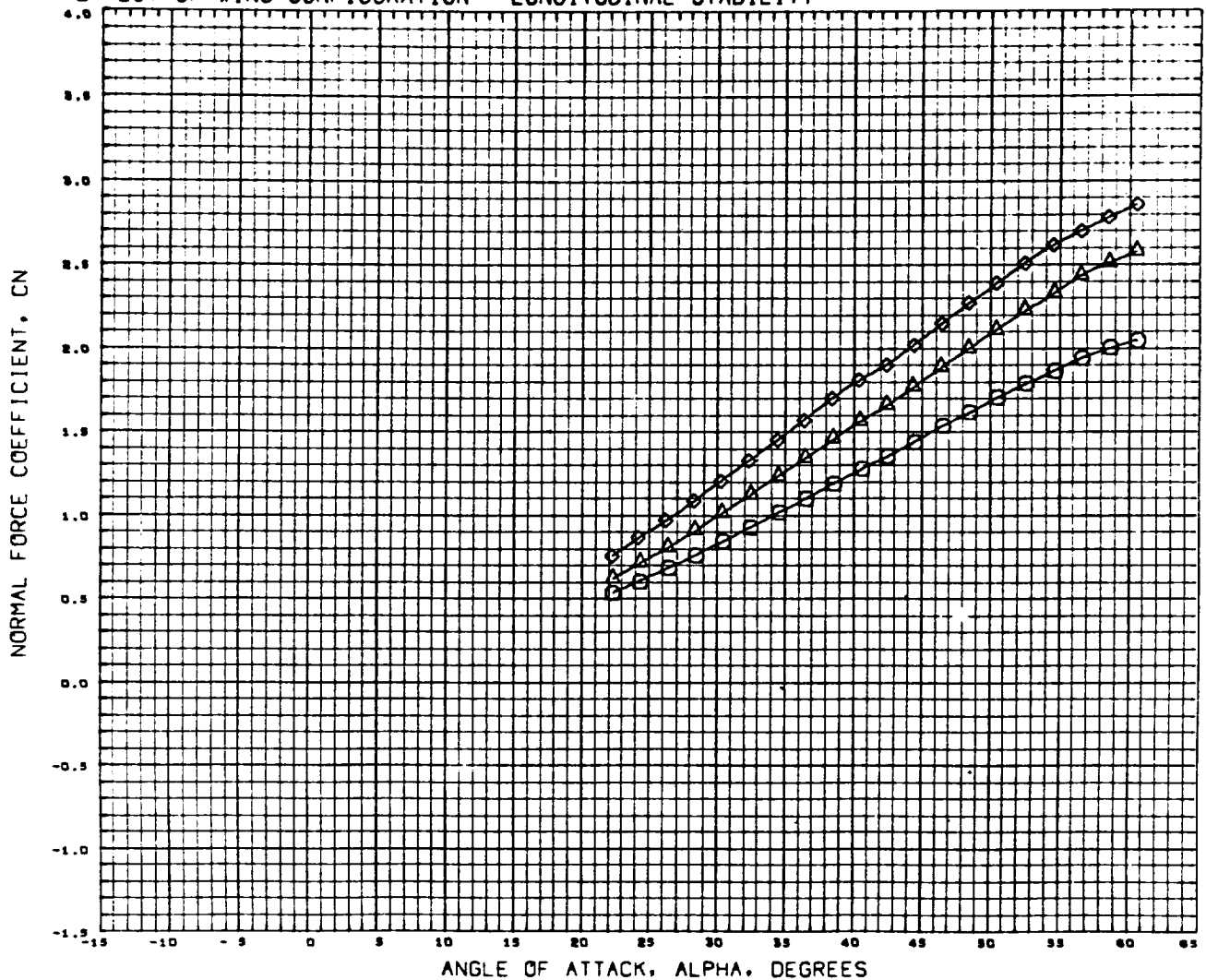
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-M3FC AR11981-3 MOEL W6B2V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3026X)	M496-M3FC AR11981-3 MOEL W4B2V2	0.000	0.000	0.000	
(P3009X)	M496-M3FC AR11981-3 MOEL W6B2V2	0.000	0.000	0.000	

MACH 3.480

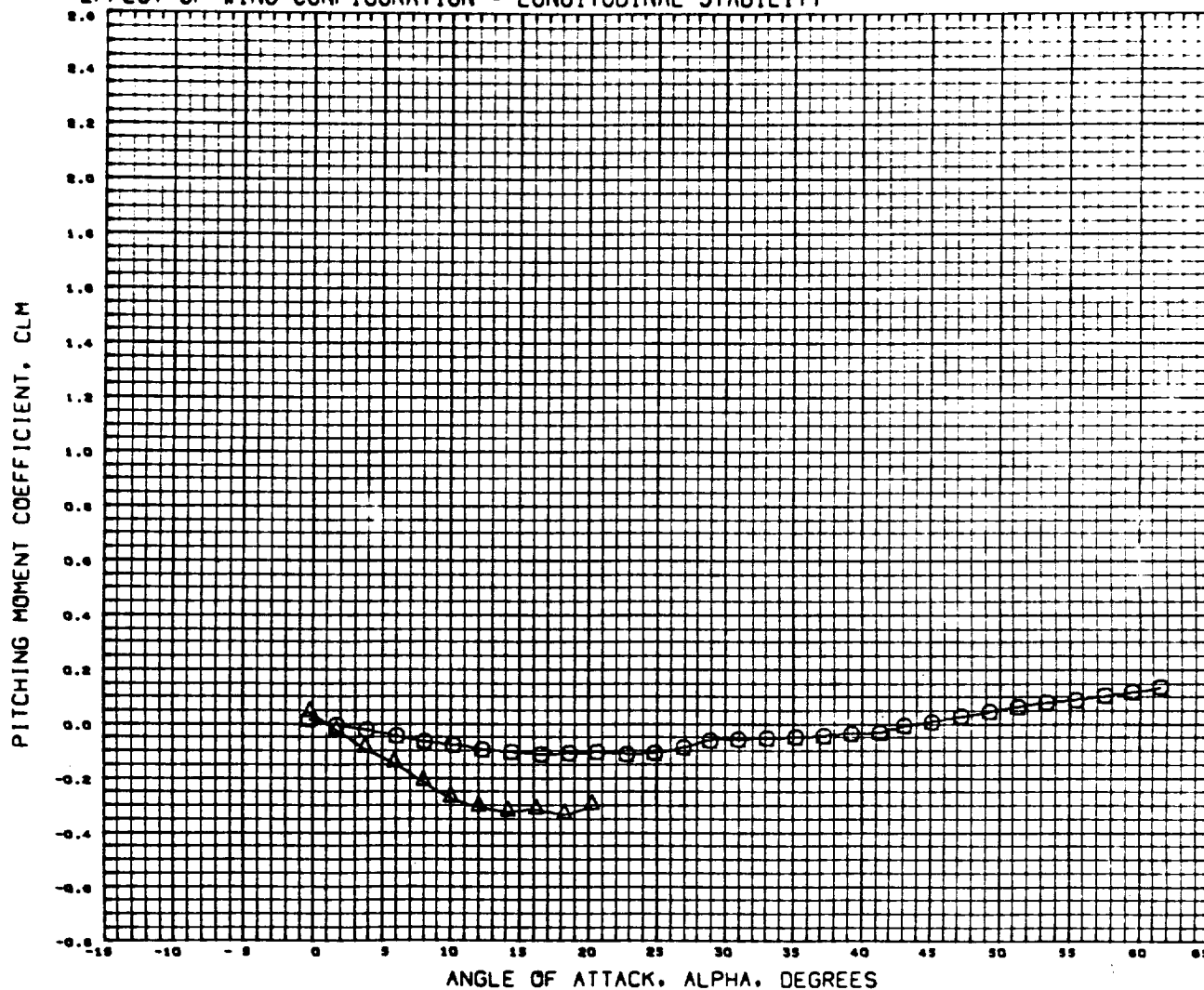
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3823X)	M496-MSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3828X)	M496-MSFC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(F3809X)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	

MACH 4.959

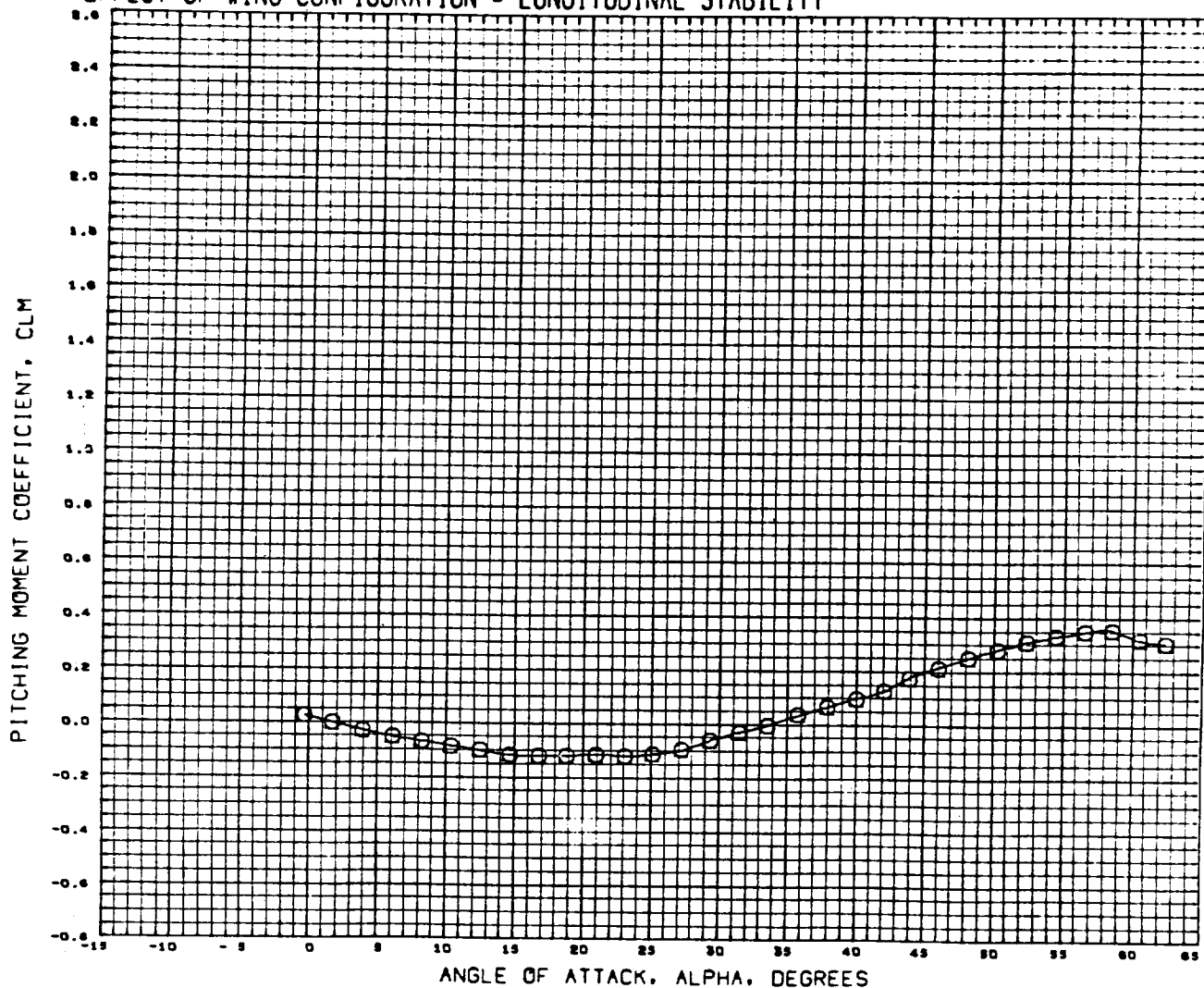
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3823X)	M496-HSFC AR1198T-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3826X)	M496-HSFC AR1198T-3 MODEL W482V2	0.000	0.000	0.000	
(F3809X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.598

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



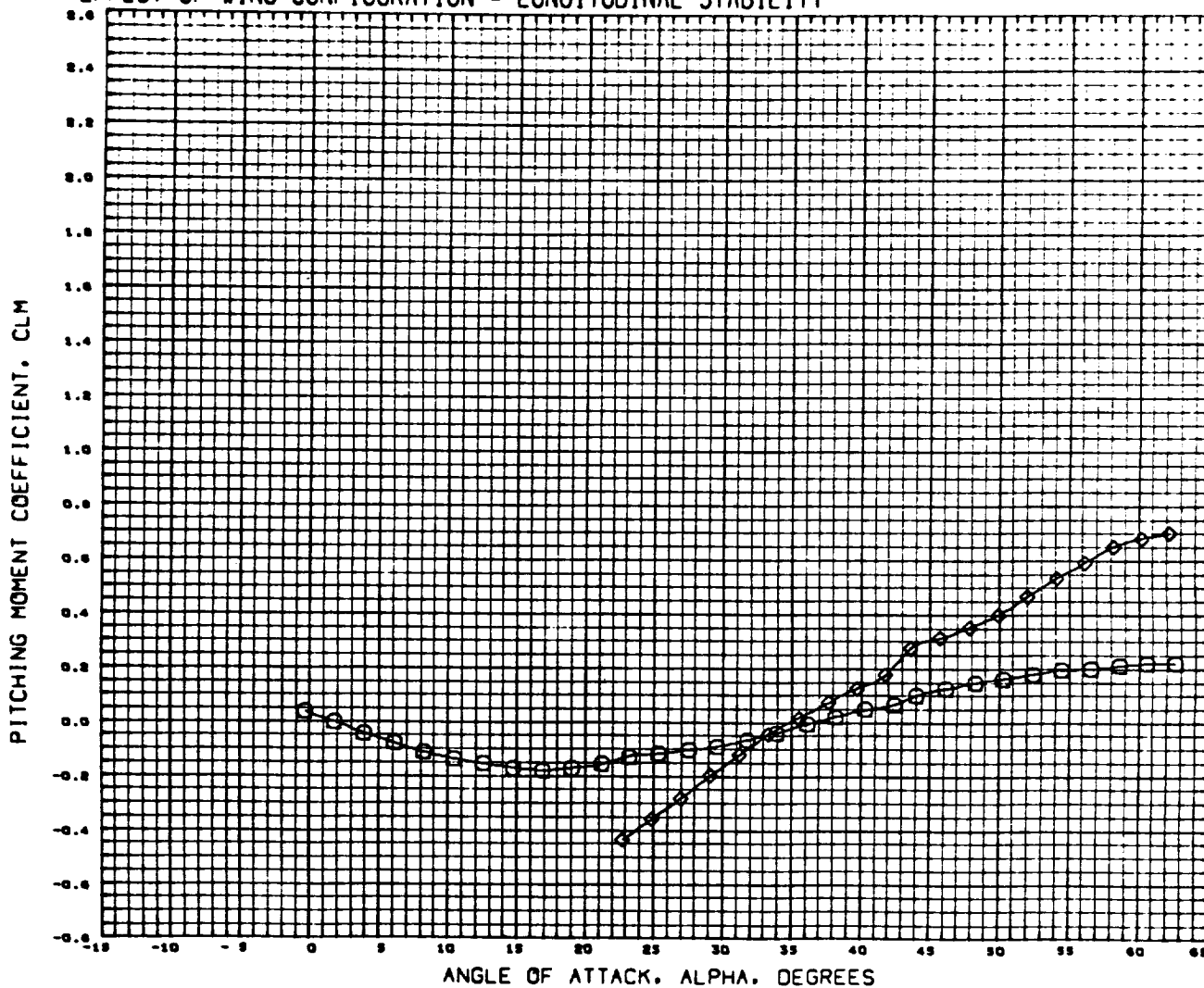
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) ○ M496-MSFC AR11981-3 MODEL W982V1
 (F3828X) △ DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) ◇ DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

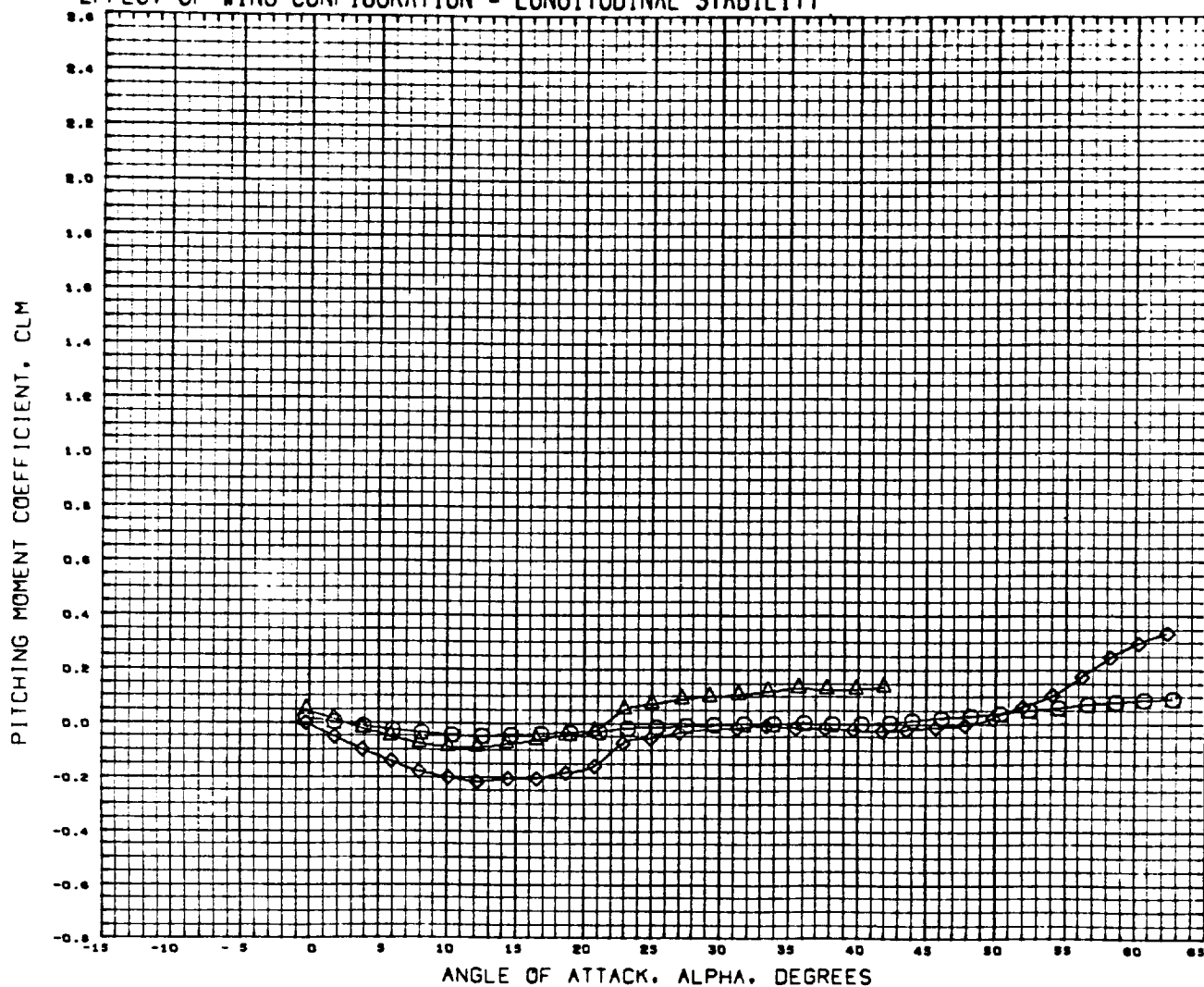
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M498-HSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3024X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	
(P3025X)	M498-HSFC AR11981-3 MODEL W982V2	0.000	0.000	0.000	

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



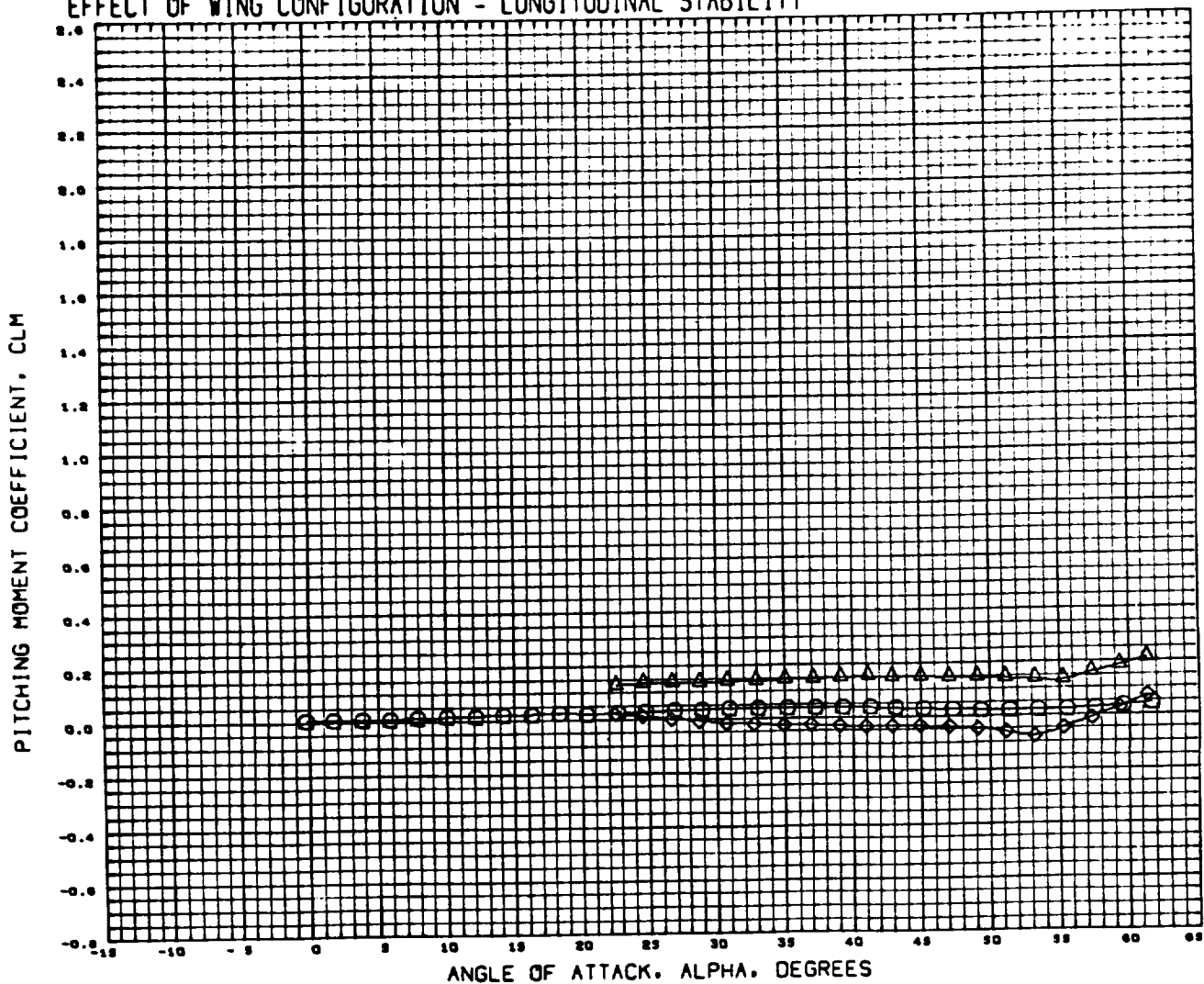
DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(F3823X)	○	M496-HSFC AR11981-3 MODEL W982V1
(F3828X)	△	M496-HSFC AR11981-3 MODEL W4C2V2
(F3809X)	◇	M496-HSFC AR11991-3 MODEL W6B2V2

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(P3823X) ○ M496-MSFC AR11981-3 MODEL W882V1

(P3828X) △ M496-MSFC AR11981-3 MODEL W882V2

(P3909X) ◇ M496-MSFC AR11981-3 MODEL W882VZ

BETA 0.000 ELEVTR 0.000 AILRON 0.000

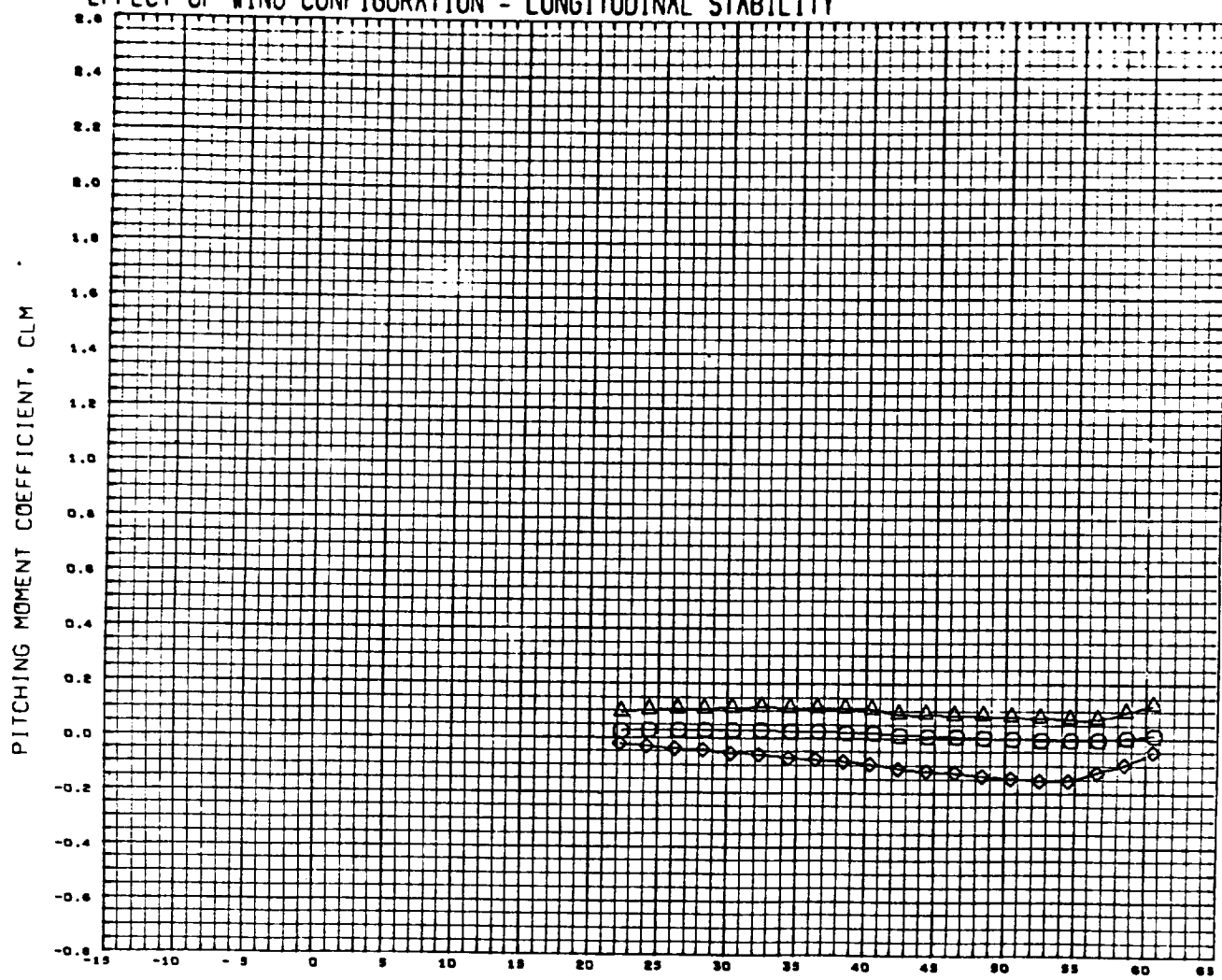
BETA 0.000 ELEVTR 0.000 AILRON 0.000

BETA 0.000 ELEVTR 0.000 AILRON 0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 3.480

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

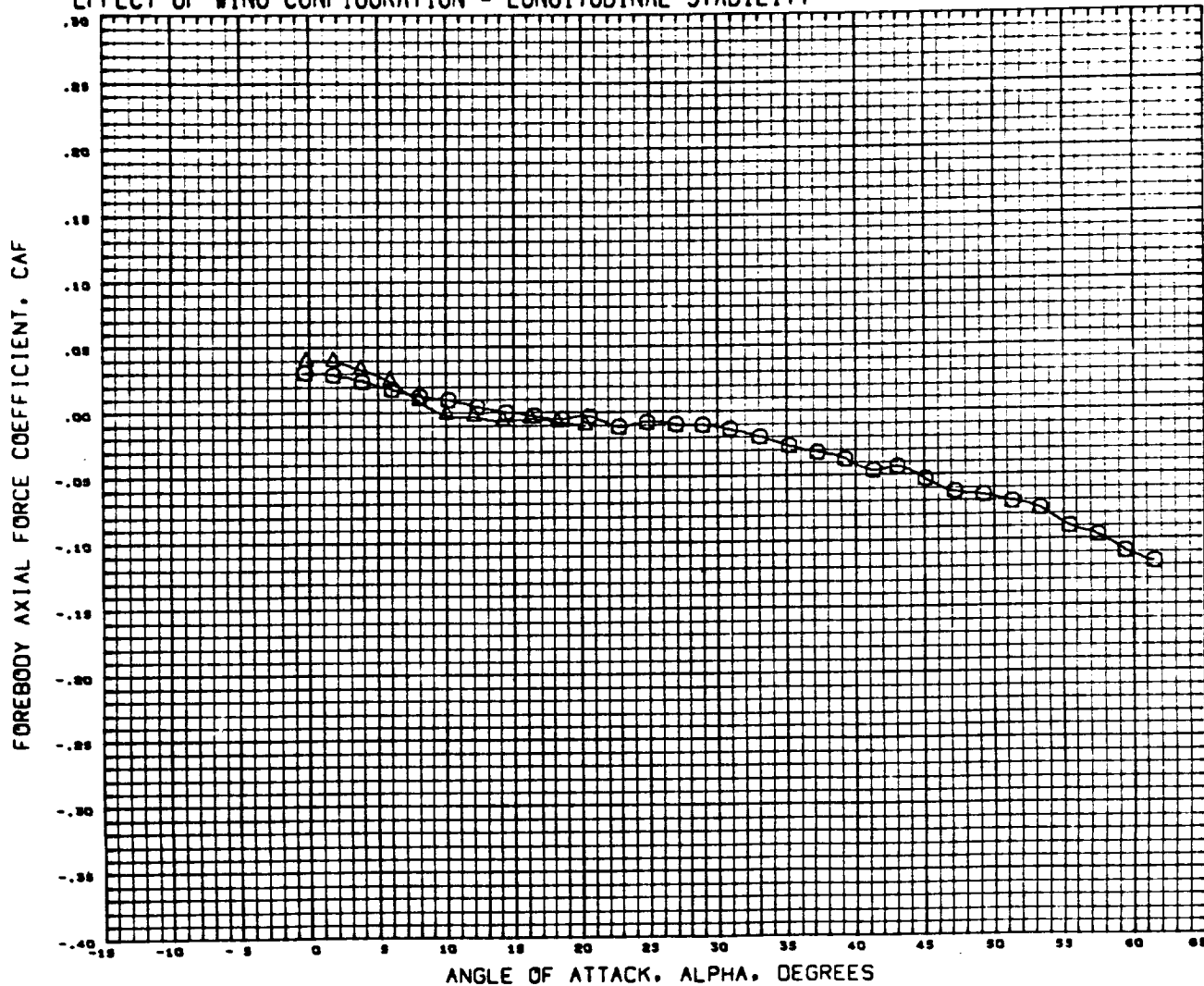


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLON
(F3823X)	M496-MSFC AR11981-3 MODEL W9B2V1	0.000	0.000	0.000
(F3828X)	M496-MSFC AR11981-3 MODEL W4B2V2	0.000	0.000	0.000
(F3809X)	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 4.959

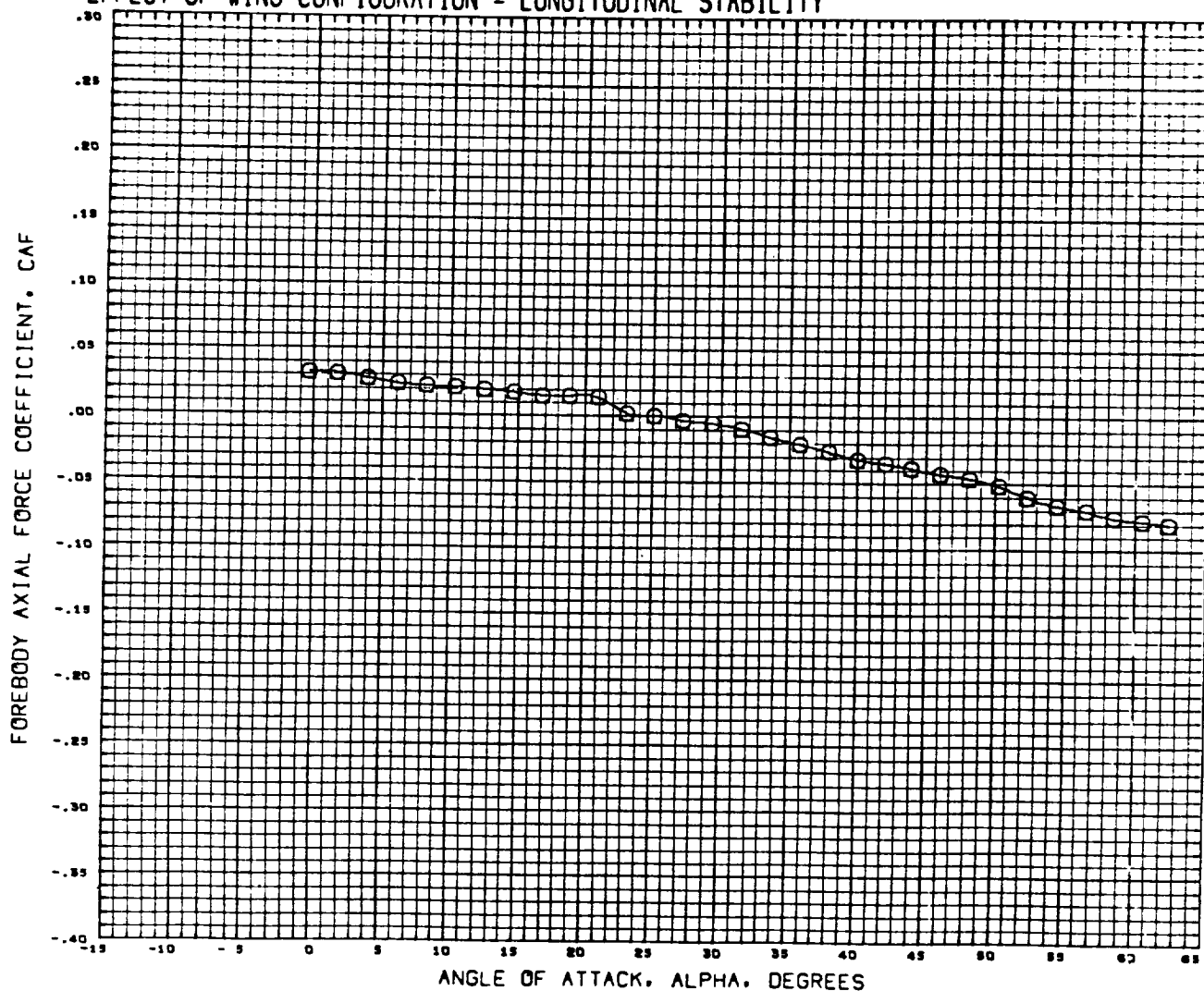
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3823X)	H496-W3FC AR11981-3 MODEL V982V1	0.000	0.000	0.000	
(P3826X)	H496-W3FC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(P3809X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.999

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



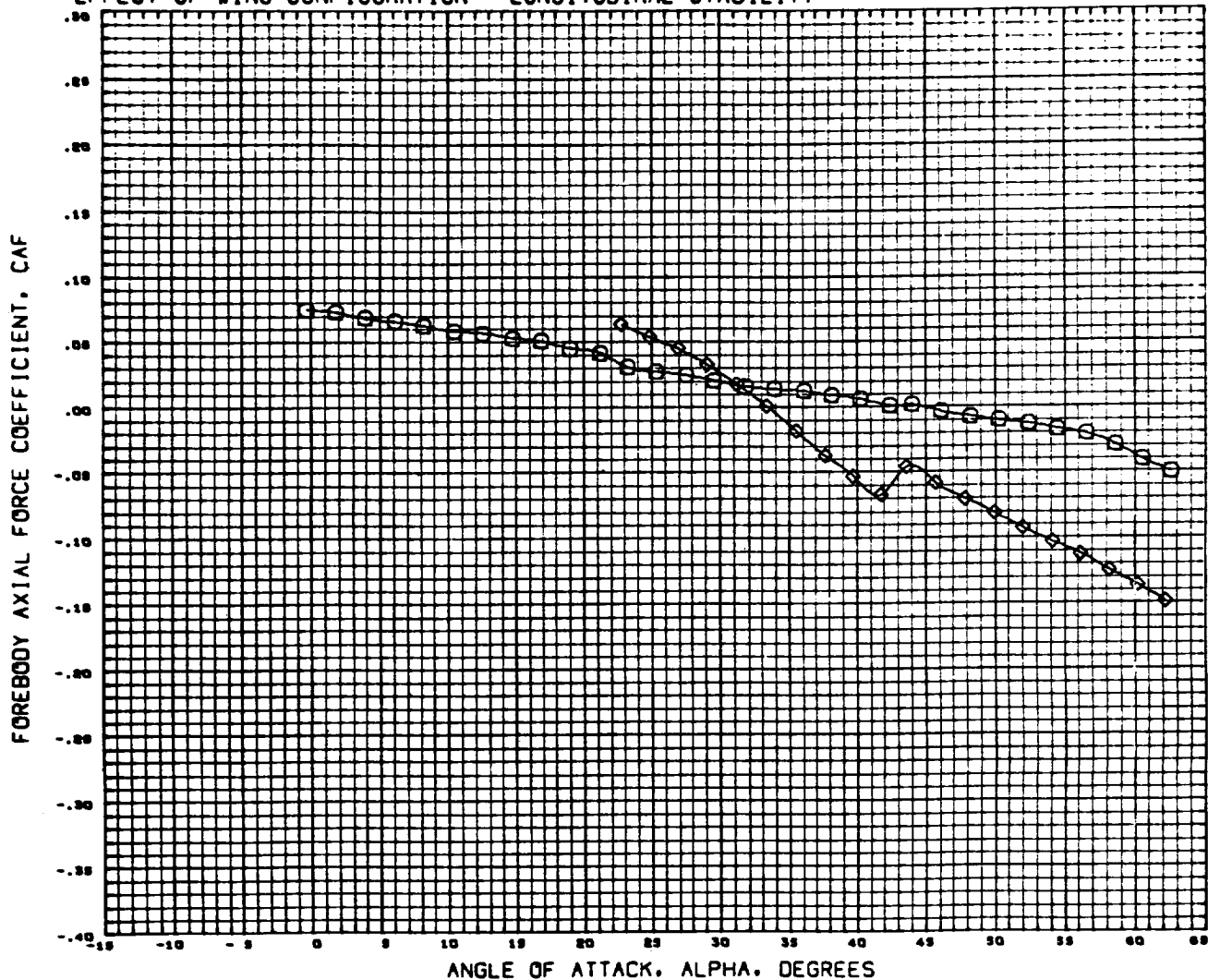
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-MSFC AR11981-3 MODEL W982V1
 (F3829X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

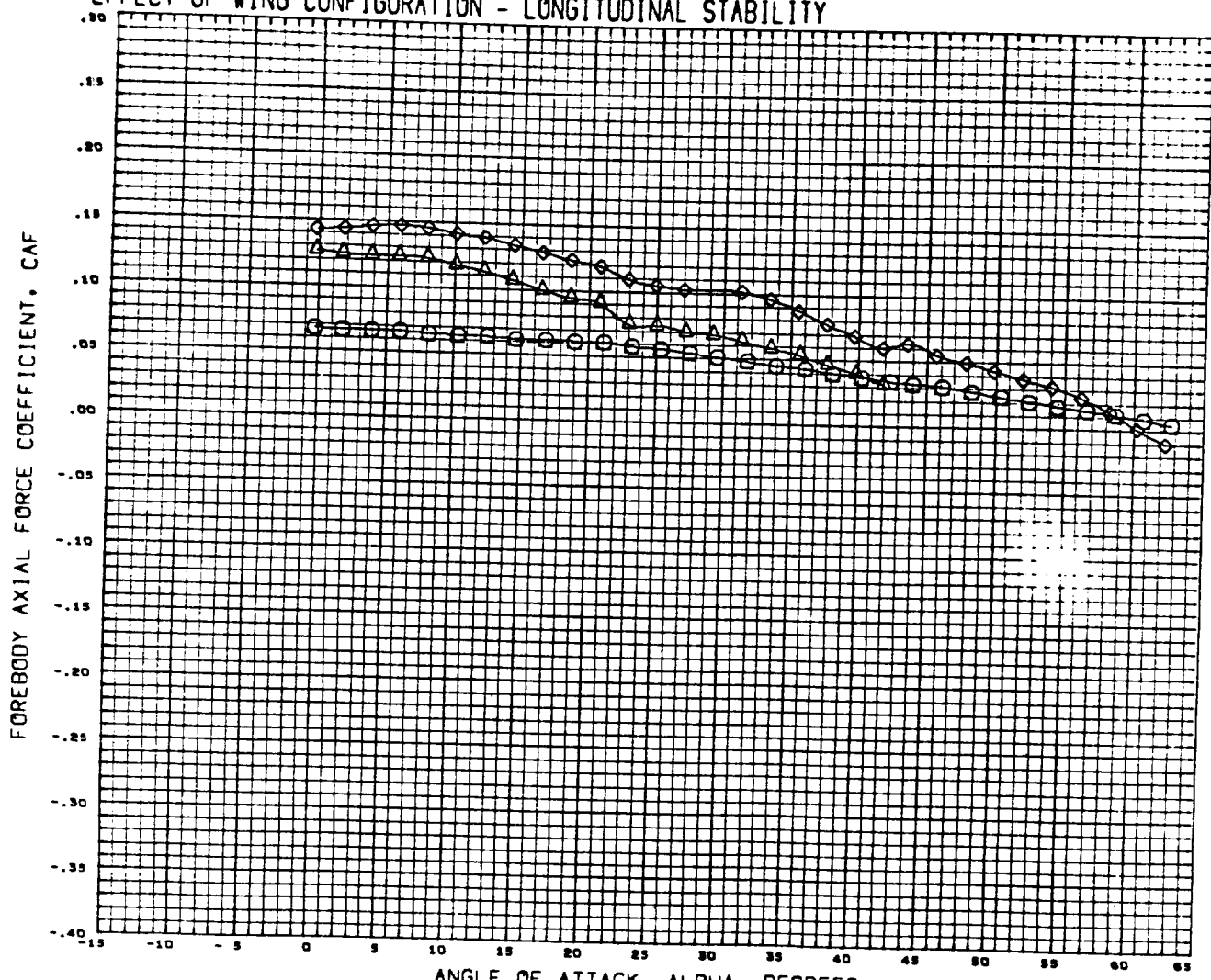
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3823X)	M496-N3PC AR11981-3 MODEL W882V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3826X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	
(P3809X)	M496-N3PC AR11981-3 MODEL W882V2	0.000	0.000	0.000	

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

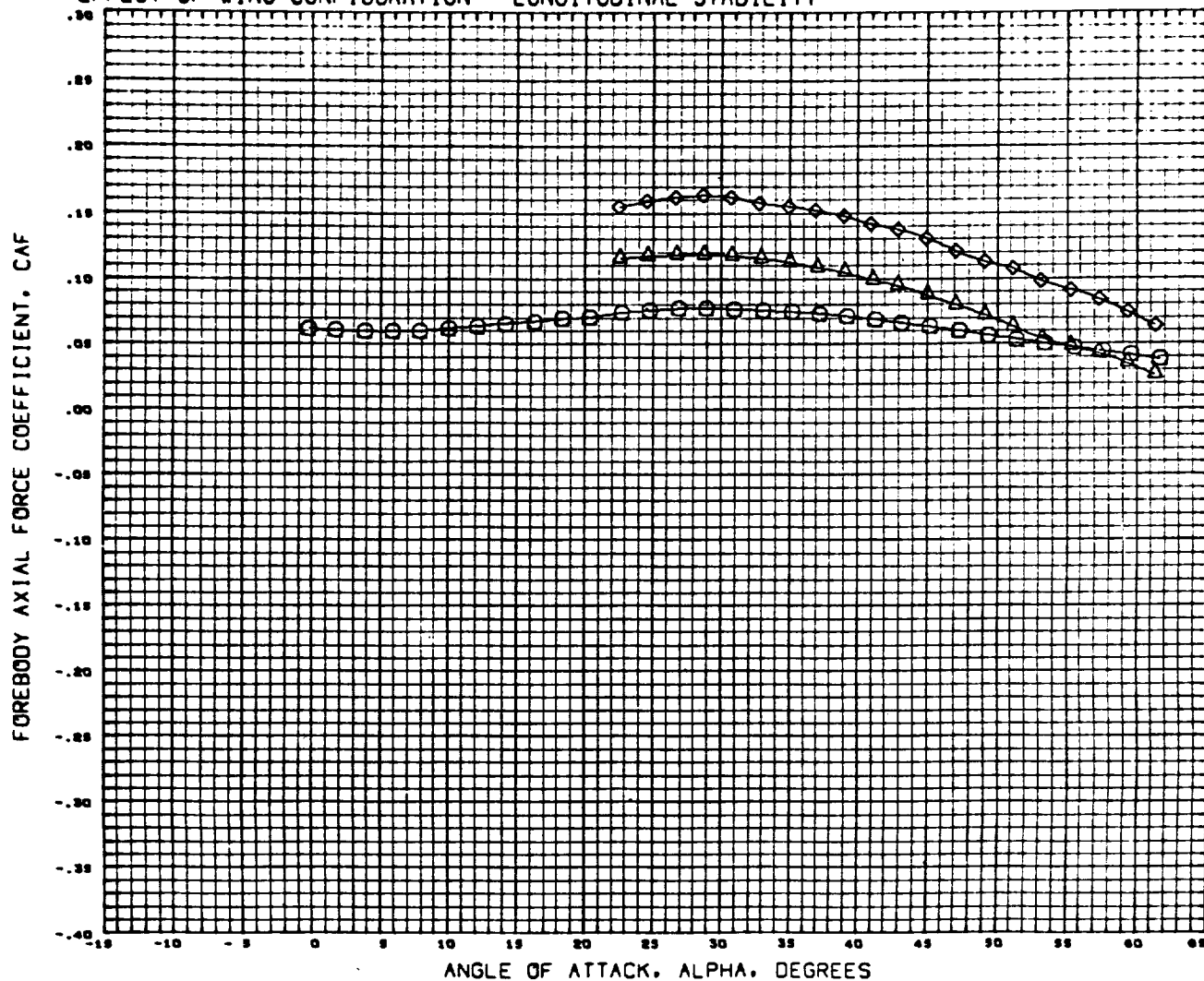


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(F3823X)	M496-MSFC AR11981-3 NOOEL W982V1	0.000	0.000	0.000
(F3826X)	M496-MSFC AR11981-3 NOOEL W482V2	0.000	0.000	0.000
(F3809X)	M496-MSFC AR11981-3 NOOEL W882V2	0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

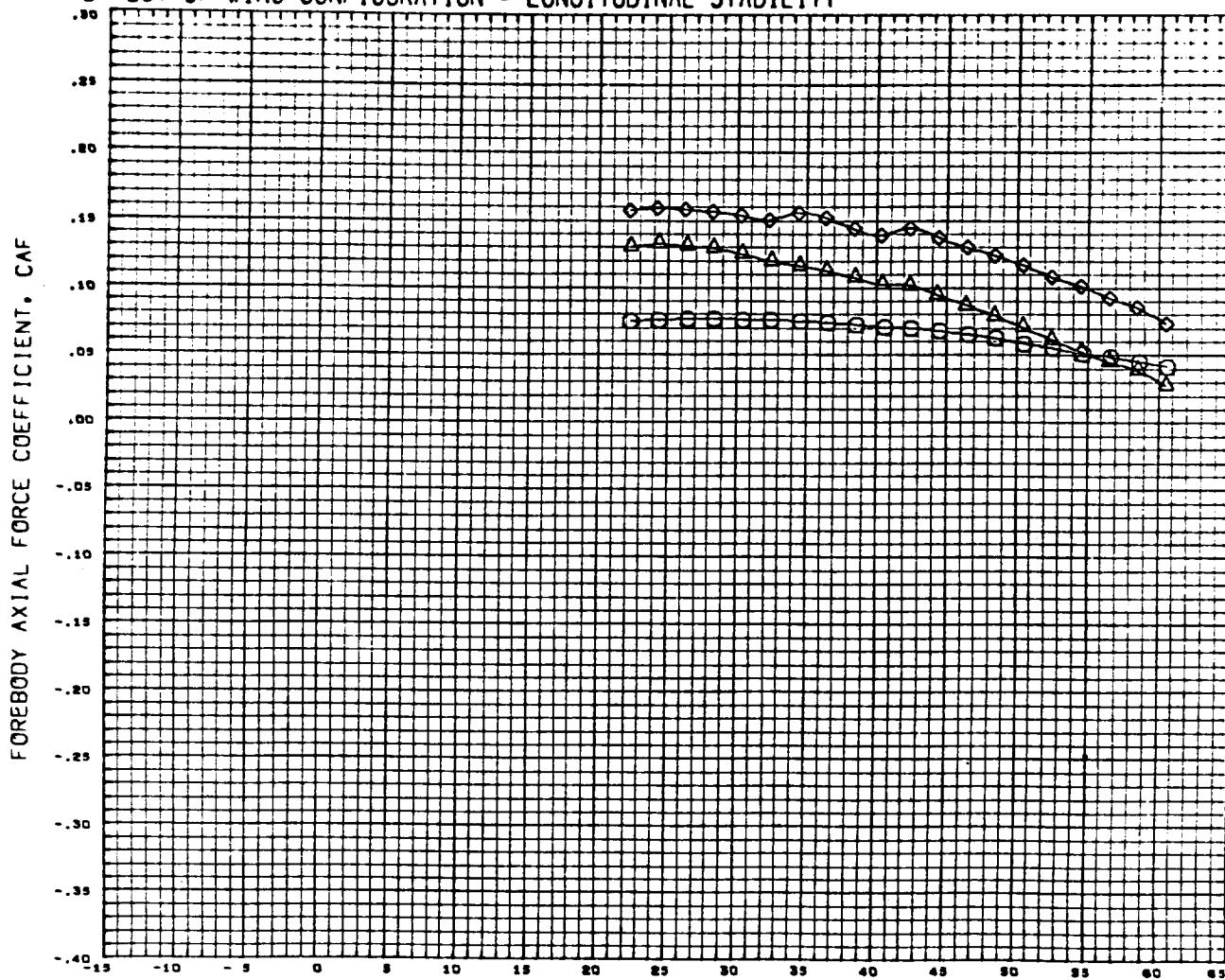
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-HSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3020X)	M496-HSFC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(P3009X)	M496-HSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	

MACH 3.400

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3823X) M496-MSFC AR11981-3 MODEL W9B2V1
 (P3824X) M496-MSFC AR11981-3 MODEL W9B2V2
 (P3829X) M496-MSFC AR11981-3 MODEL W9B2V2

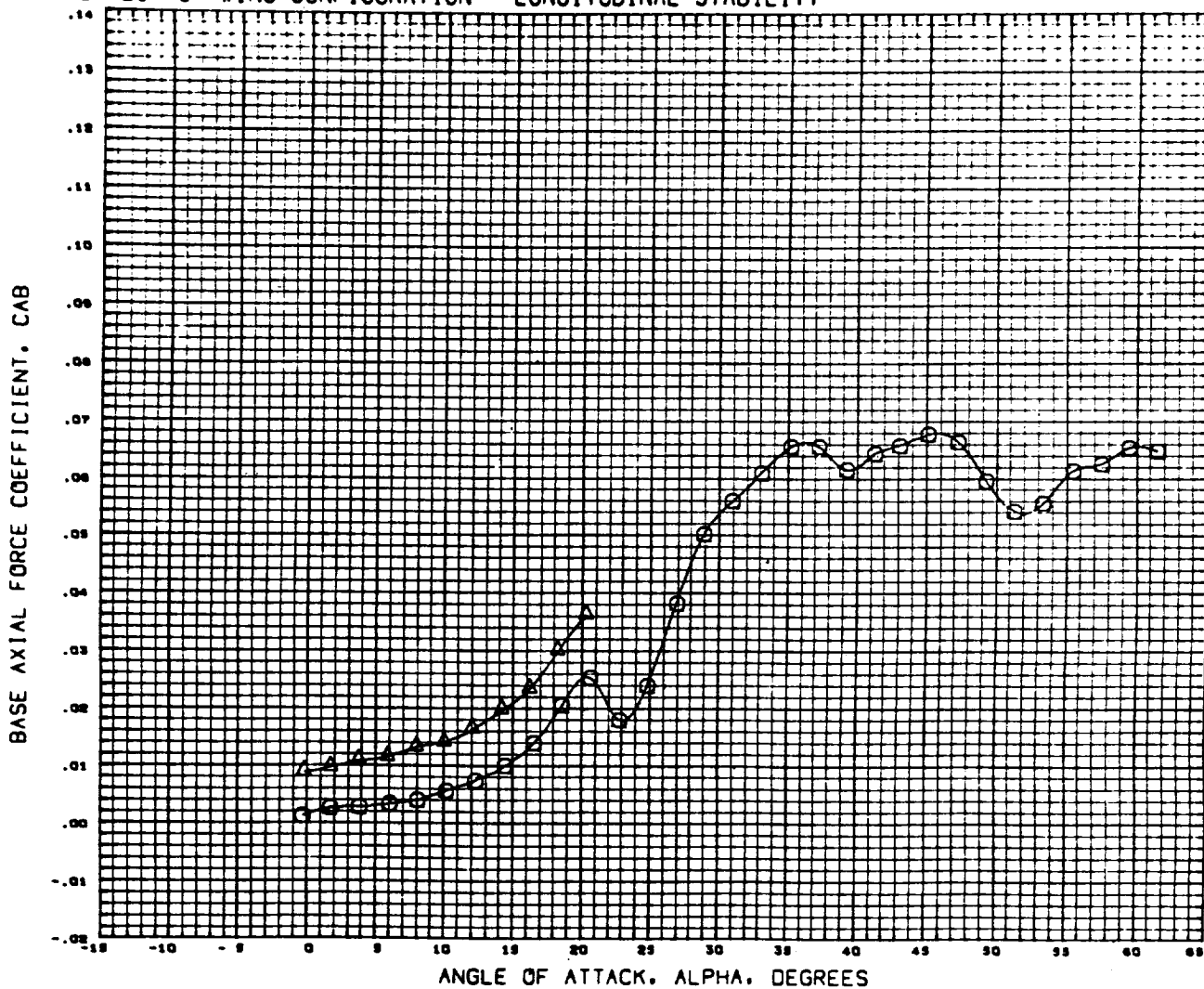
ANGLE OF ATTACK, ALPHA, DEGREES

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 4.959

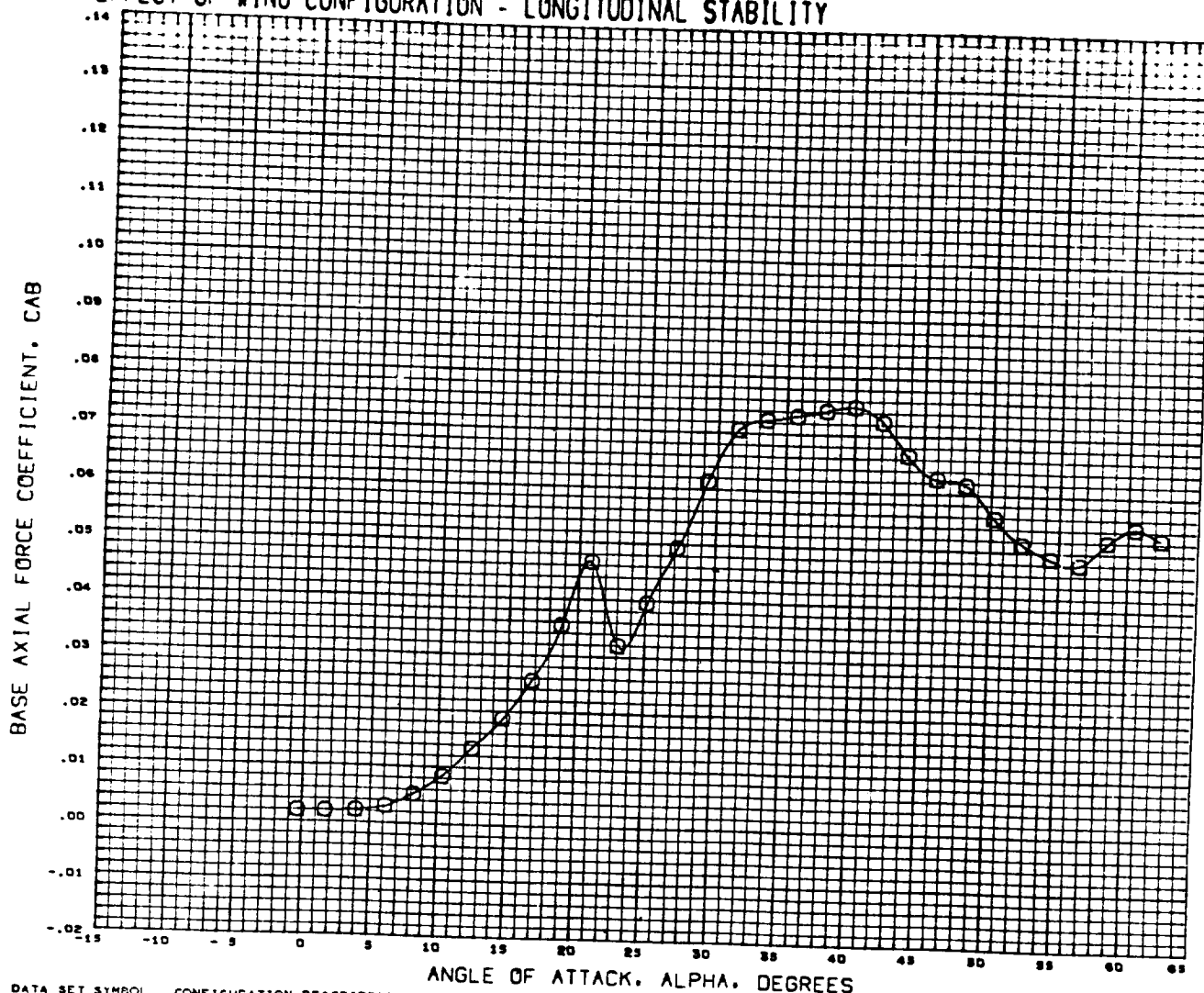
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	ATLRON	
(P3623X)	W496-HSFC AR1198I-3 MODEL W882V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3626X)	W496-HSFC AR1198I-3 MODEL W482V2	0.000	0.000	0.000	
(P3609X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.599

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



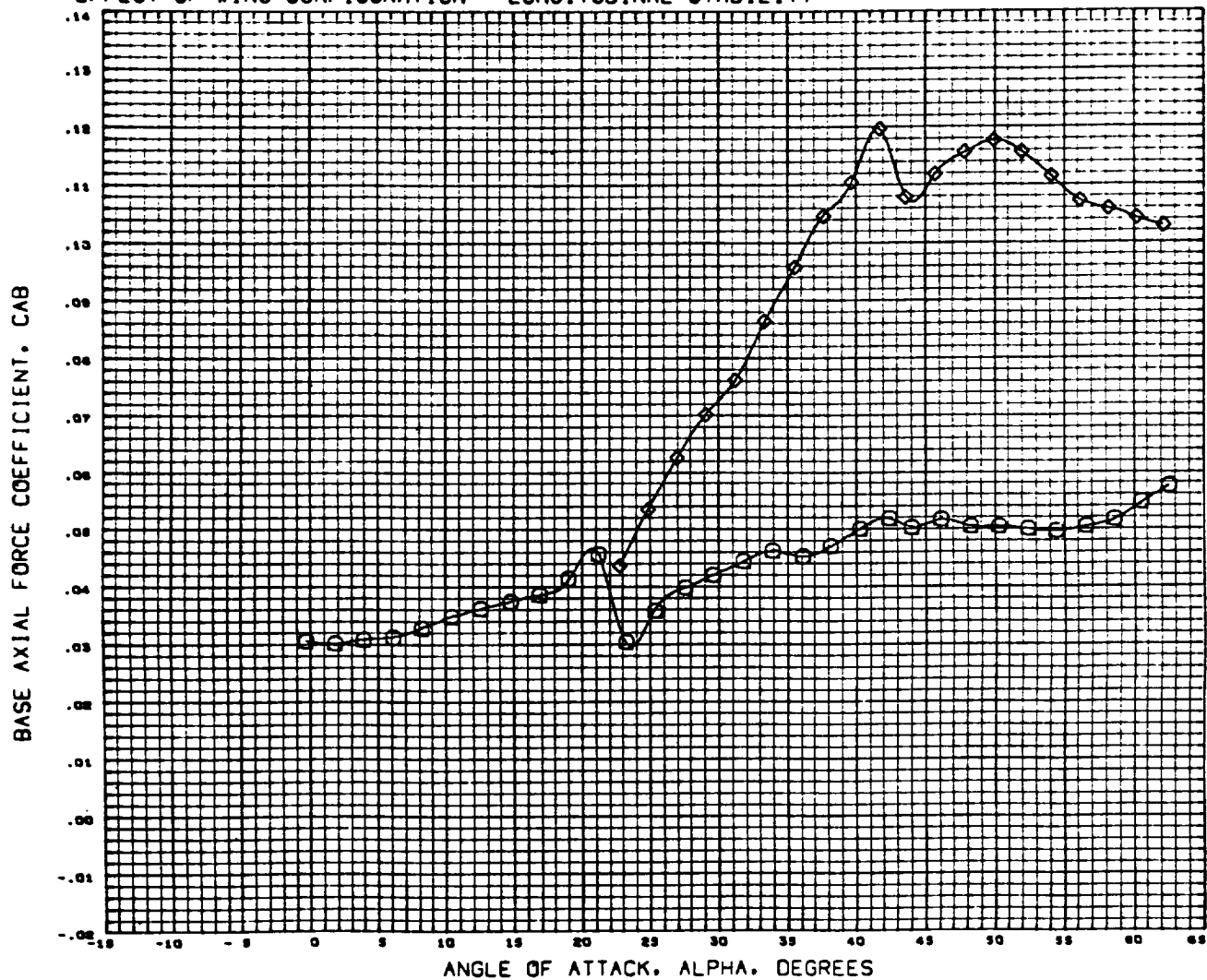
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3423X) \bigcirc M496-HSFC AR11981-3 MODEL W9B2V1
 (F3428X) \triangle DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) \diamond DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



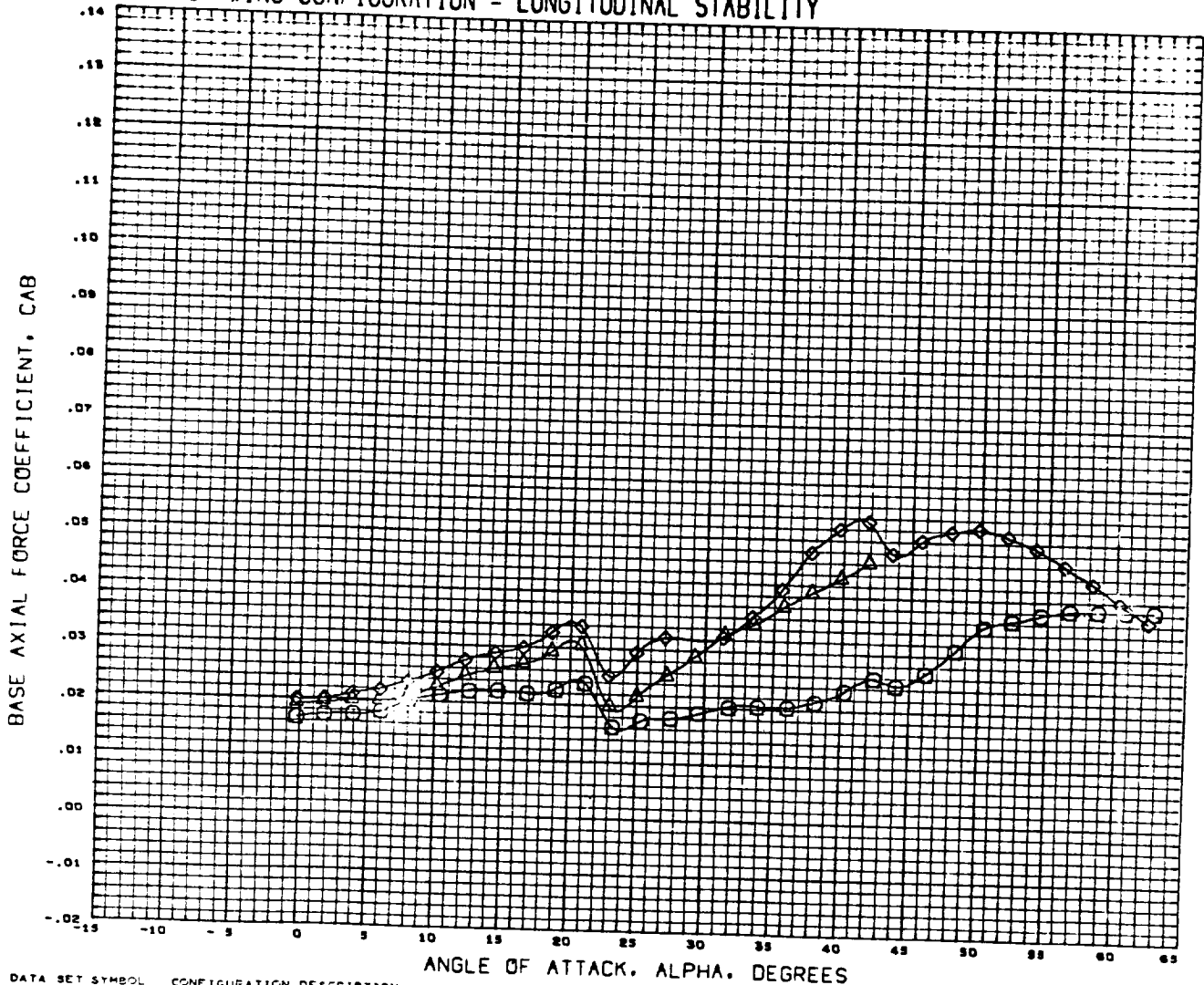
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(P3823X) ○ H496-HSFC AR11981-3 MODEL W882V1
(P3826X) ◇ DATA NOT AVAILABLE FOR ALL CONDITIONS
(P3809X) ◇ H496-HSFC AR11981-3 MODEL W882V2

BETA ELEVTR AILTRON
0.000 0.000 0.000
0.000 0.000 0.000
0.000 0.000 0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



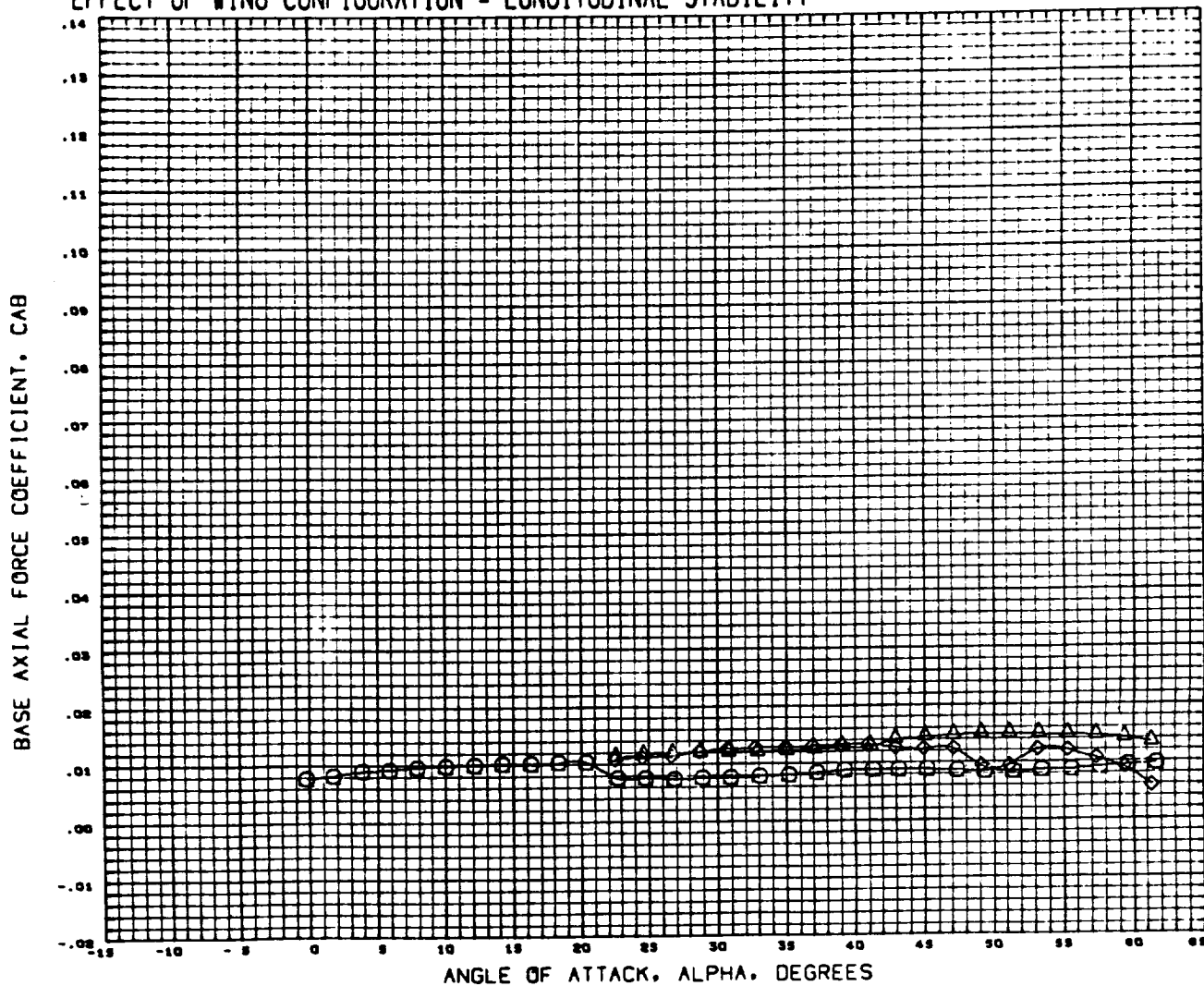
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3923X) M496-MSFC AR11981-3 MODEL W982V1
 (F3925X) M496-MSFC AR11981-3 MODEL W482V2
 (F3929X) M496-MSFC AR11981-3 MODEL W682V2

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 1.961

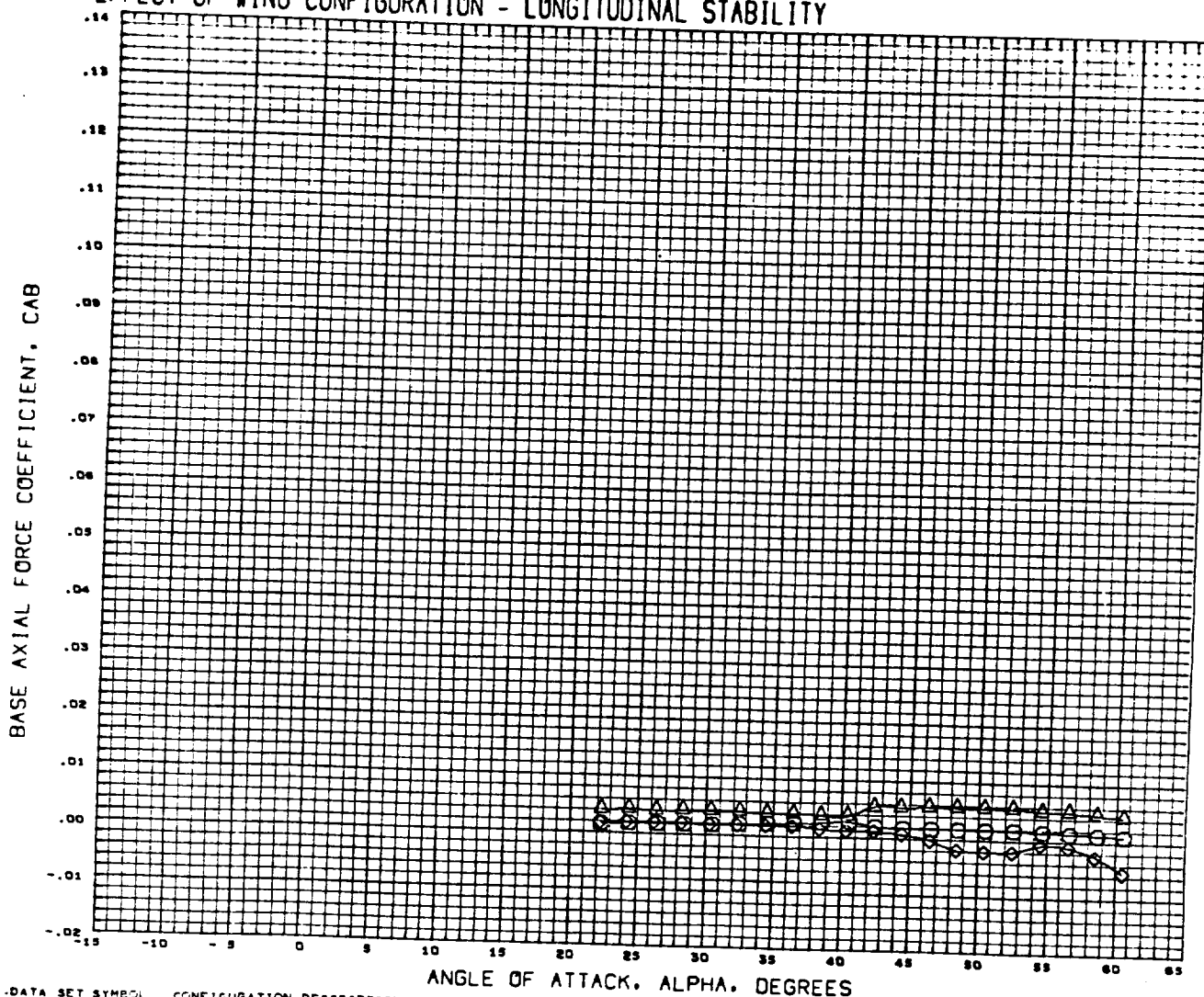
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3823X)	○	M496-HSFC AR11981-3 MODEL W882V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3828X)	△	M496-HSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	
(P3908X)	◇	M496-HSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	

MACH 3.490

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-MSFC AR11981-3 MODEL W882V1
 (F3828X) M496-MSFC AR11981-3 MODEL W482V2
 (F3809X) M496-MSFC AR11981-3 MODEL W882V2

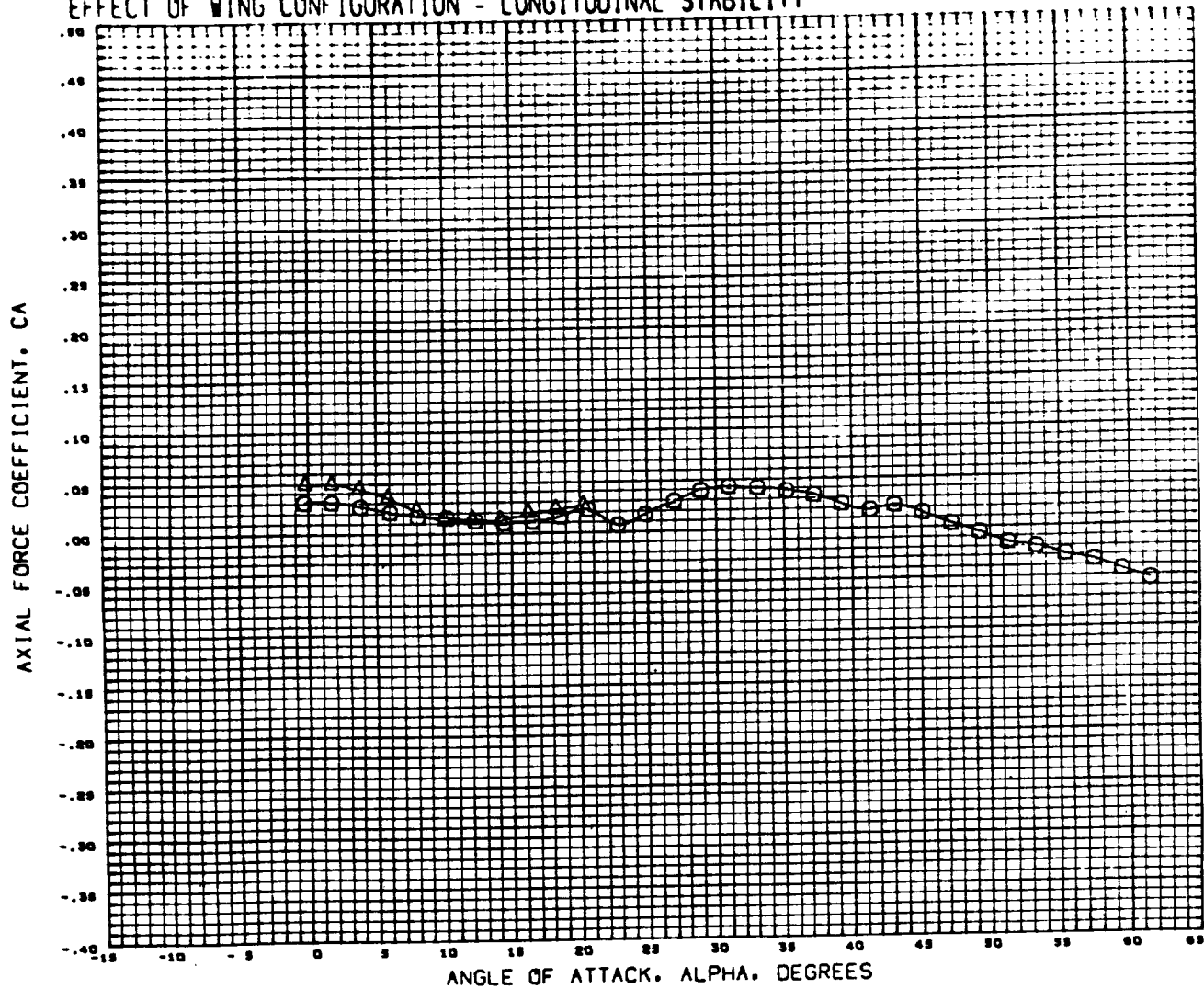
ANGLE OF ATTACK, ALPHA, DEGREES

BETA 0.000 0.000 0.000
 ELEVTR 0.000 0.000 0.000
 AILRON 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 4.959

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

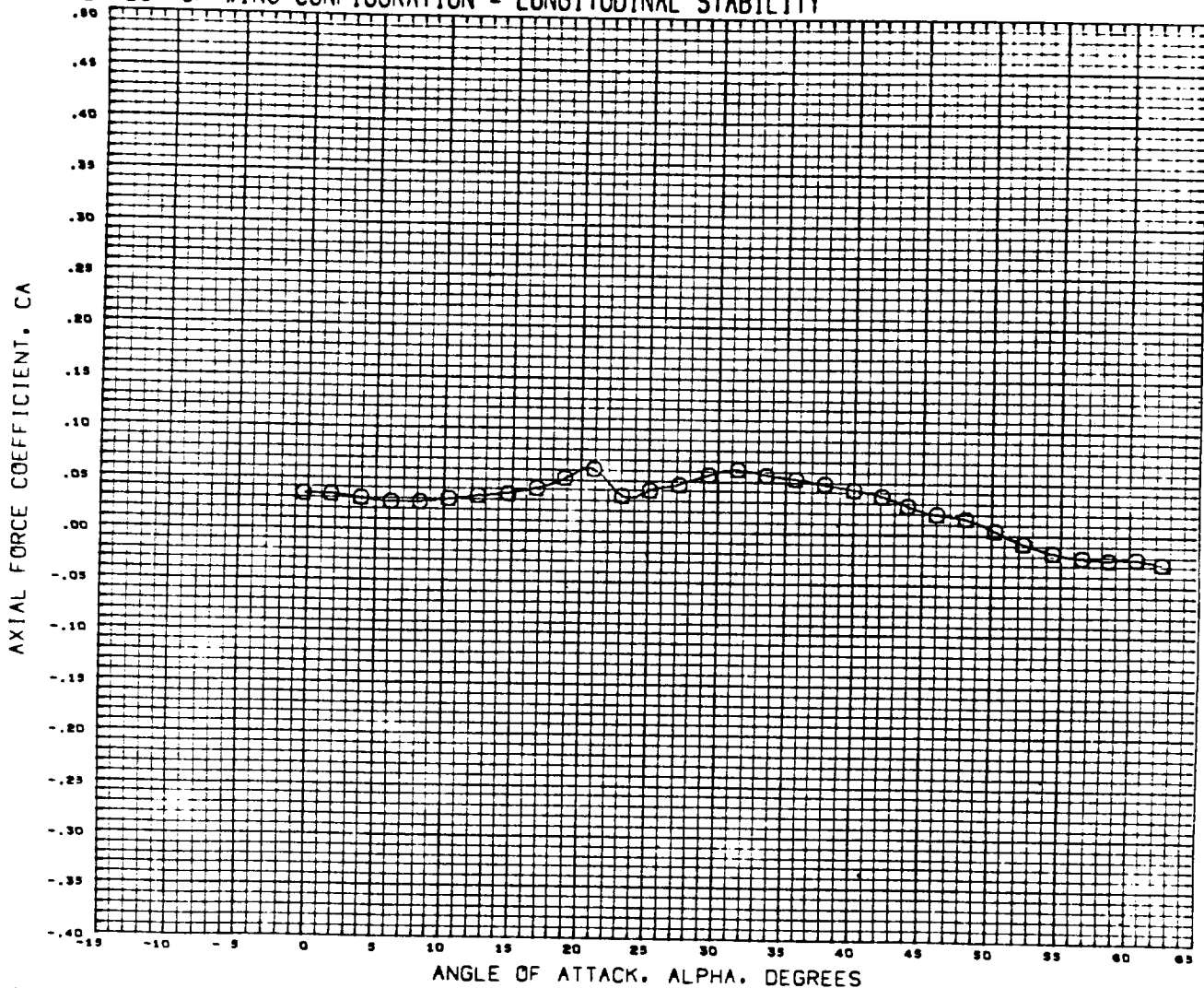
(P3823X)	○	M496-HSFC	AR11981-3	MODEL	W882V1
(P3826X)	△	M496-HSFC	AR11981-3	MODEL	W882V2
(P3809X)	◇	DATA NOT AVAILABLE FOR ALL CONDITIONS			

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 0.999

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



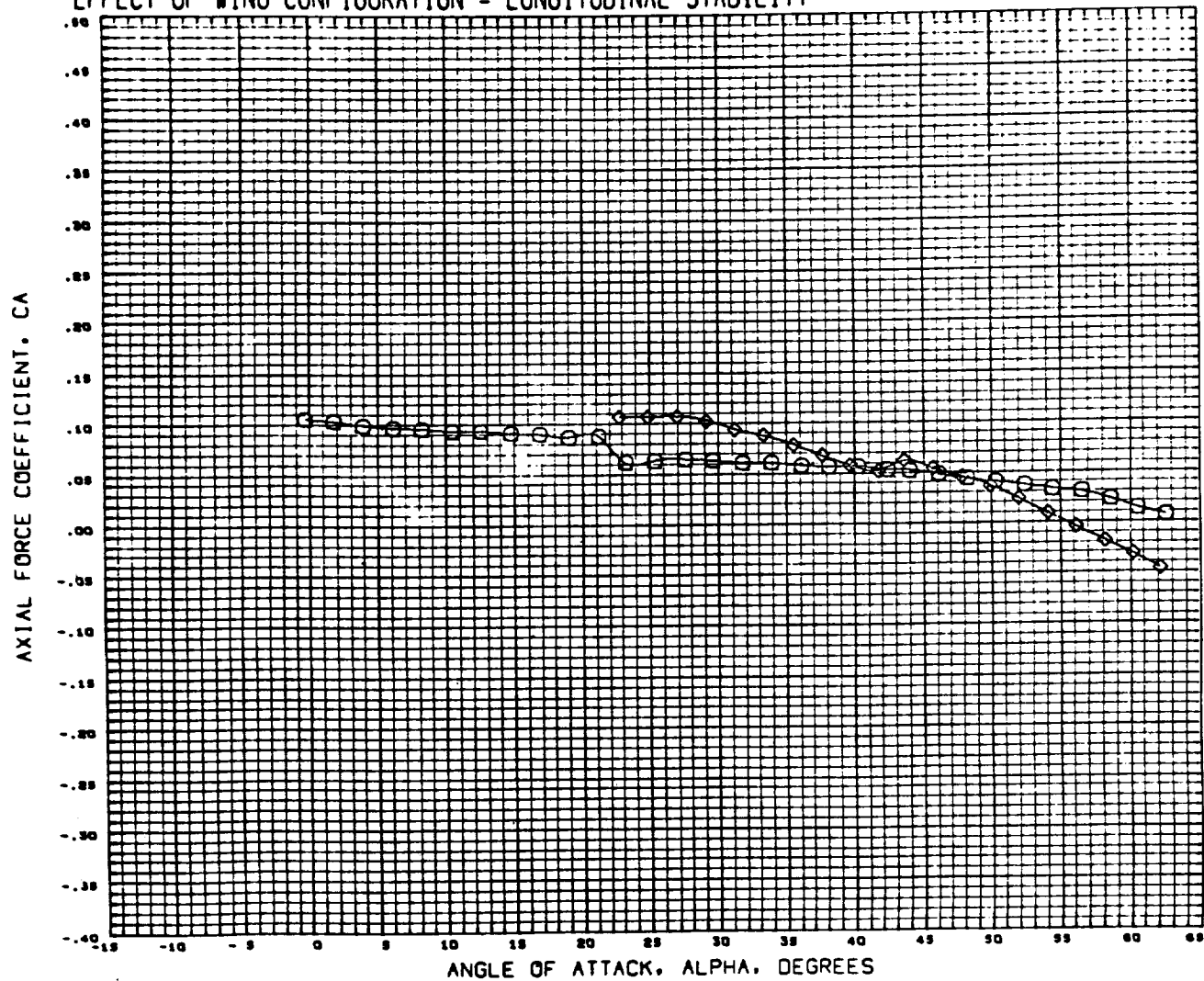
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3623X) \bigcirc M496-MSFC AR1981-3 MODEL W982V1
 (P3624X) \triangle DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3609X) \diamond DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	ATLON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



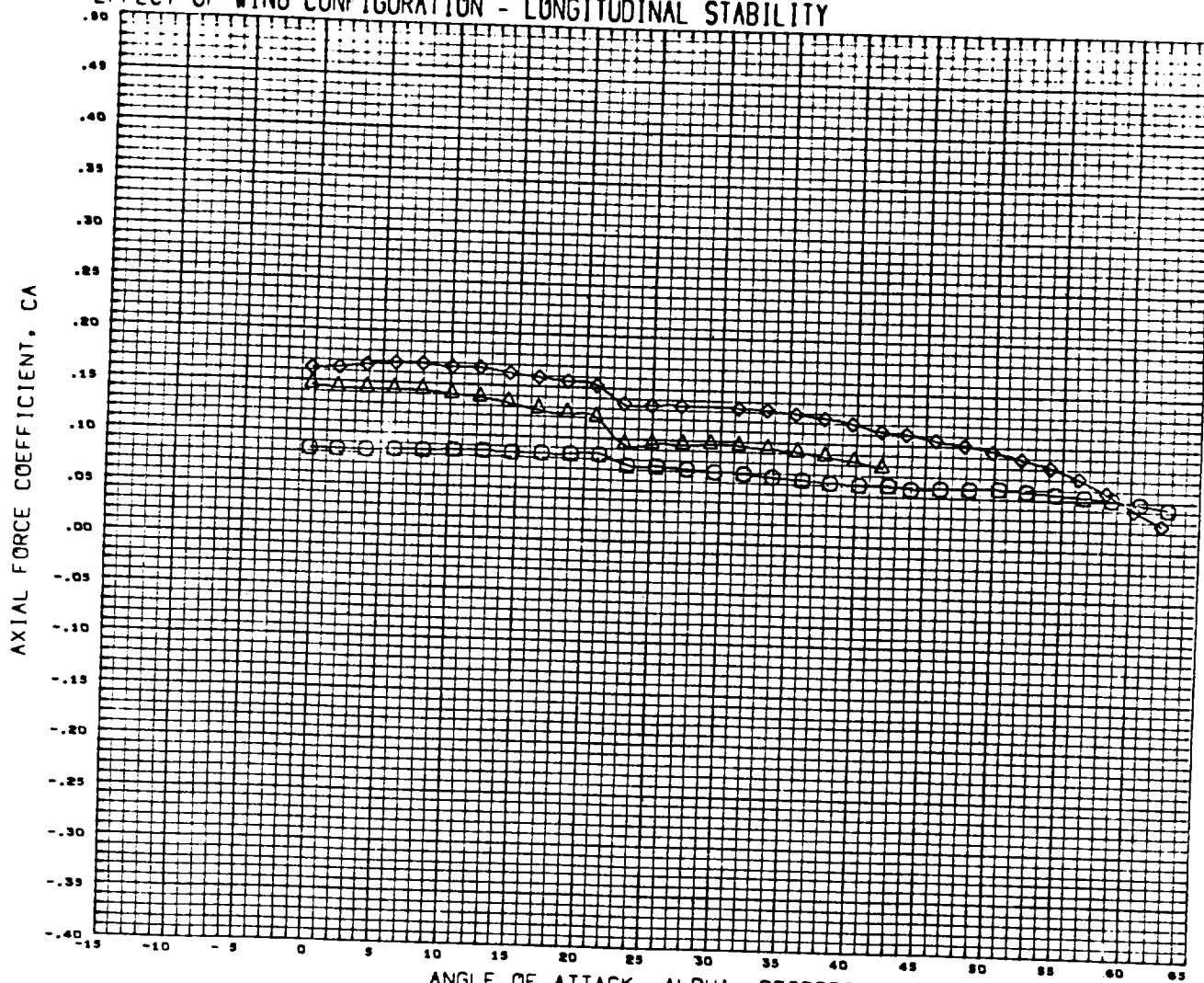
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3023X) M496-HSFC AR11901-3 MODEL W982V1
 (P3020X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3009X) M496-HSFC AR11901-3 MODEL W982V2

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

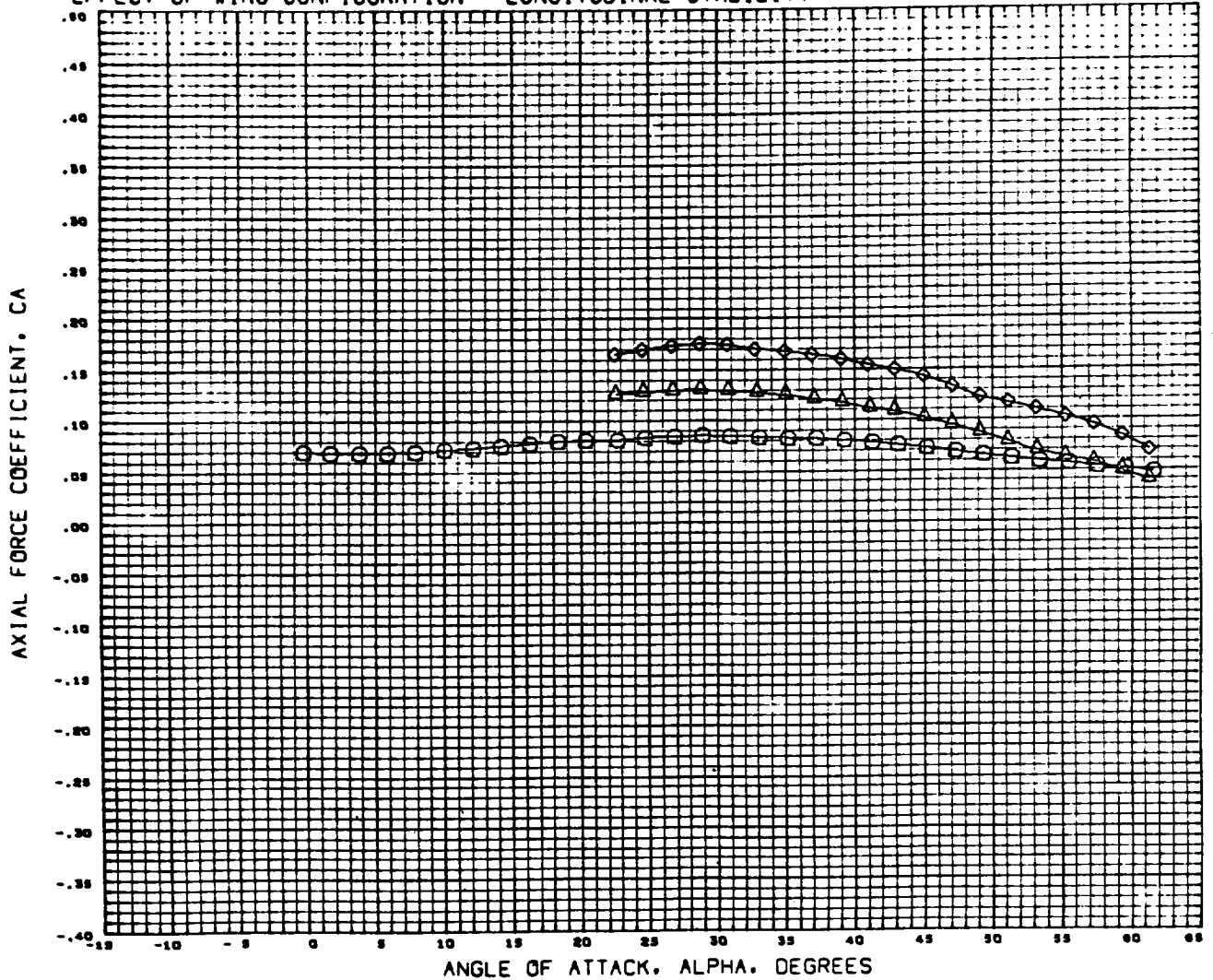


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	MODEL	W982V1	BETA	ELEVTR	ATLROW
(F3823X)	M496-HSFC	AR11981-3	MODEL	0.000	0.000	0.000
(F3824X)	M496-HSFC	AR11981-3	MODEL	0.000	0.000	0.000
(F3829X)	M496-HSFC	AR11981-3	MODEL	0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

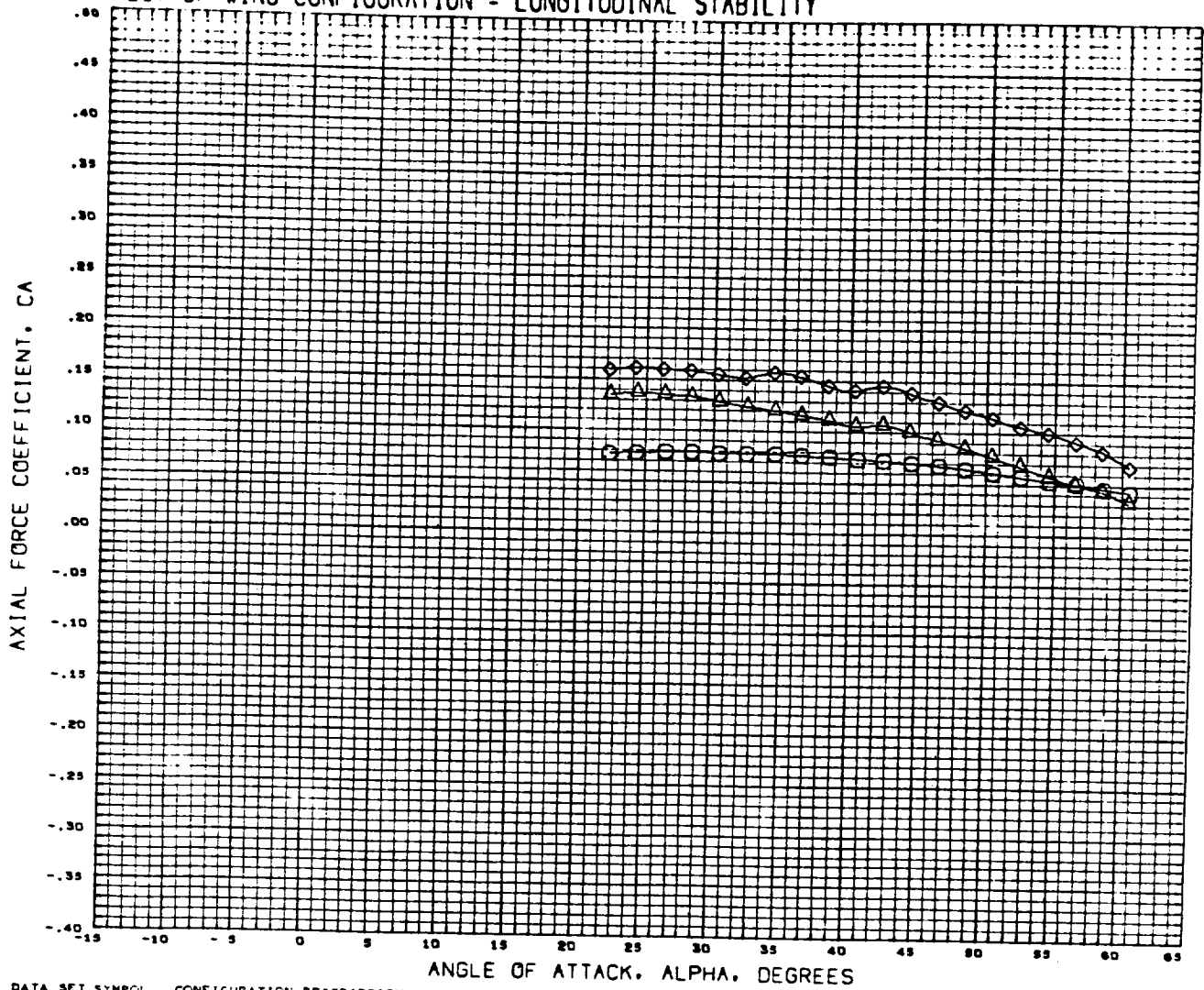
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3623X)	M496-HSPC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3626X)	M496-HSPC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(F3609X)	M496-HSPC AR11981-3 MODEL W682V2	0.000	0.000	0.000	

MACH 3.480

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



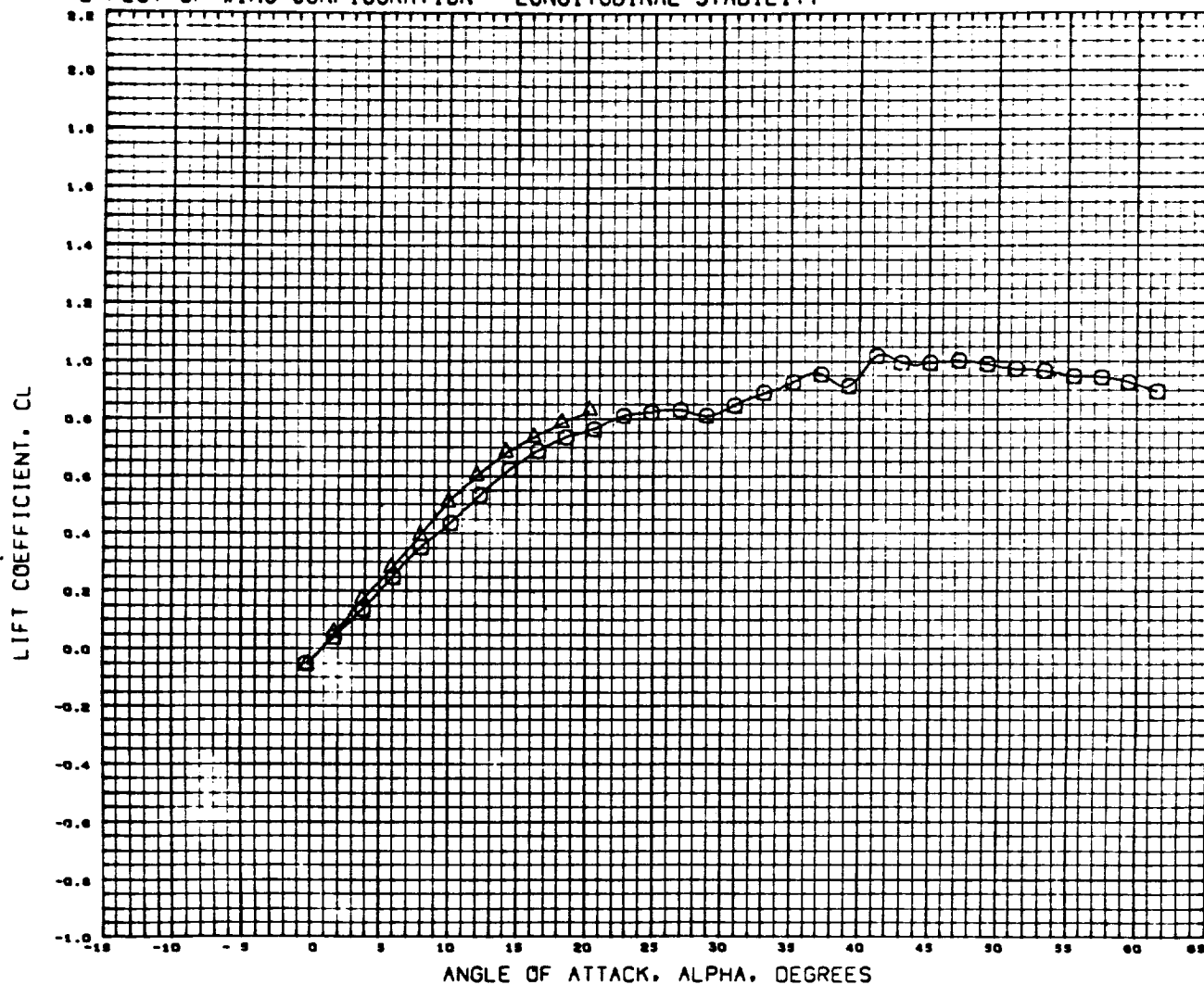
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) \circ M496-MSFC AR11981-3 MODEL
 (F3826X) \triangle M496-MSFC AR11981-3 MODEL
 (F3909X) \diamond M496-MSFC AR11981-3 MODEL

BETA ELEVTR AILRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 4.959

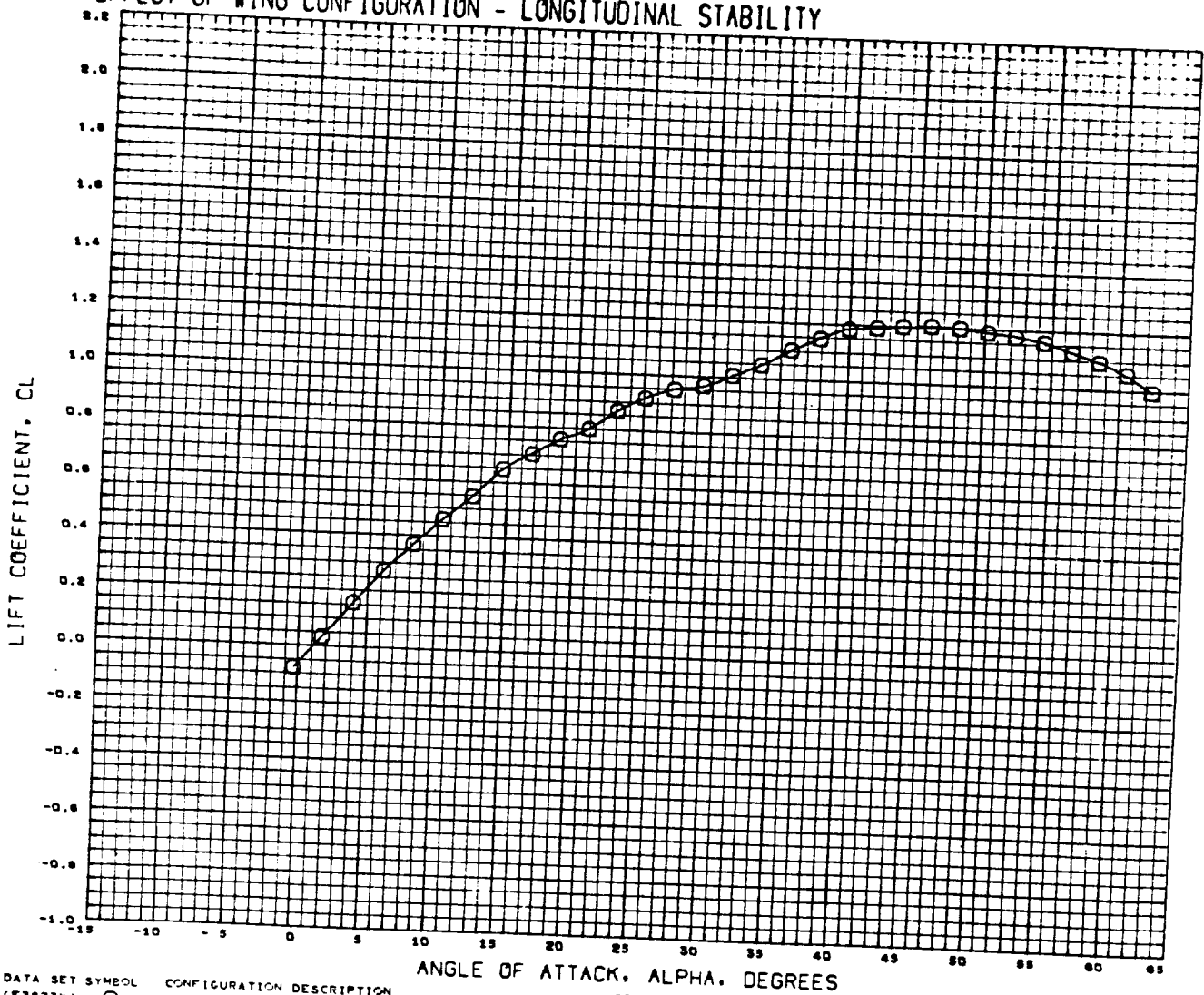
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3023X)	M498-M3FC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3024X)	M498-M3FC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(F3009X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.595

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3823X) M496-MSFC AR11981-3 MODEL W982V1
 (P3828X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS

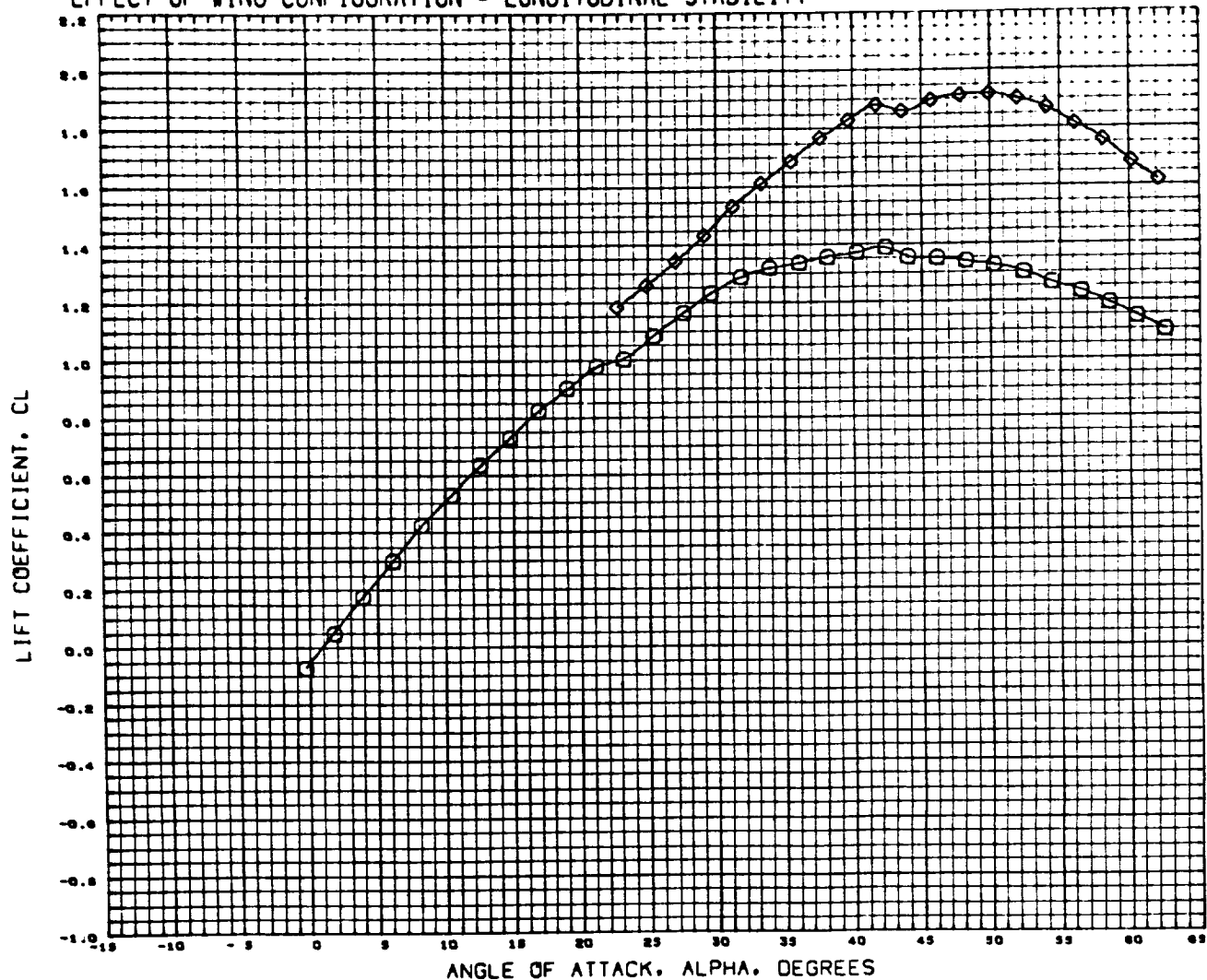
BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 0.900

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EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



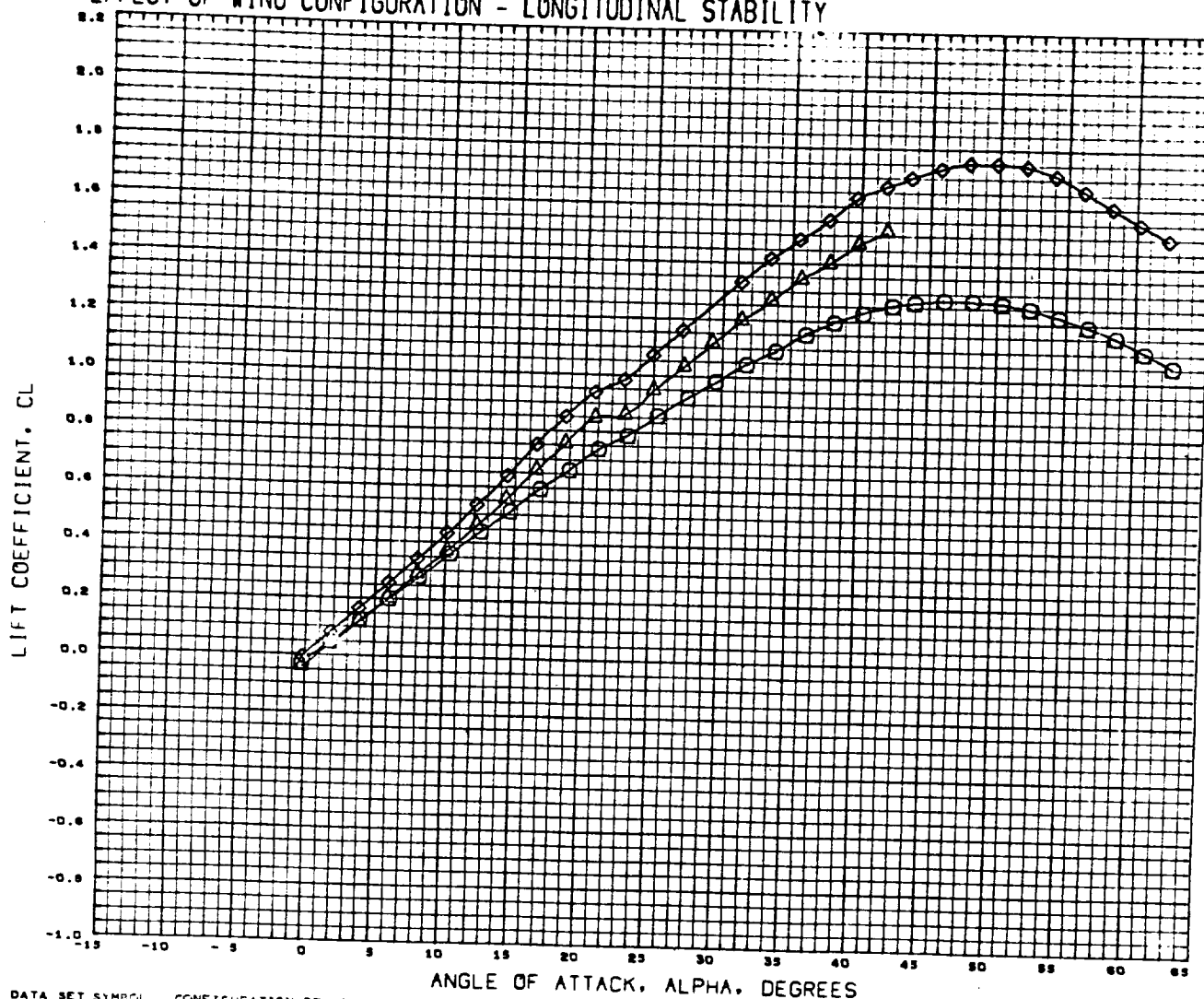
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3823X) \bigcirc M496-M5FC AR11961-3 MODEL W82V1
 (P3828X) \triangle DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3859X) \diamond M496-M5FC AR11961-3 MODEL W82V2

BETA 0.000
 ELEVTR 0.000
 ATLRON 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

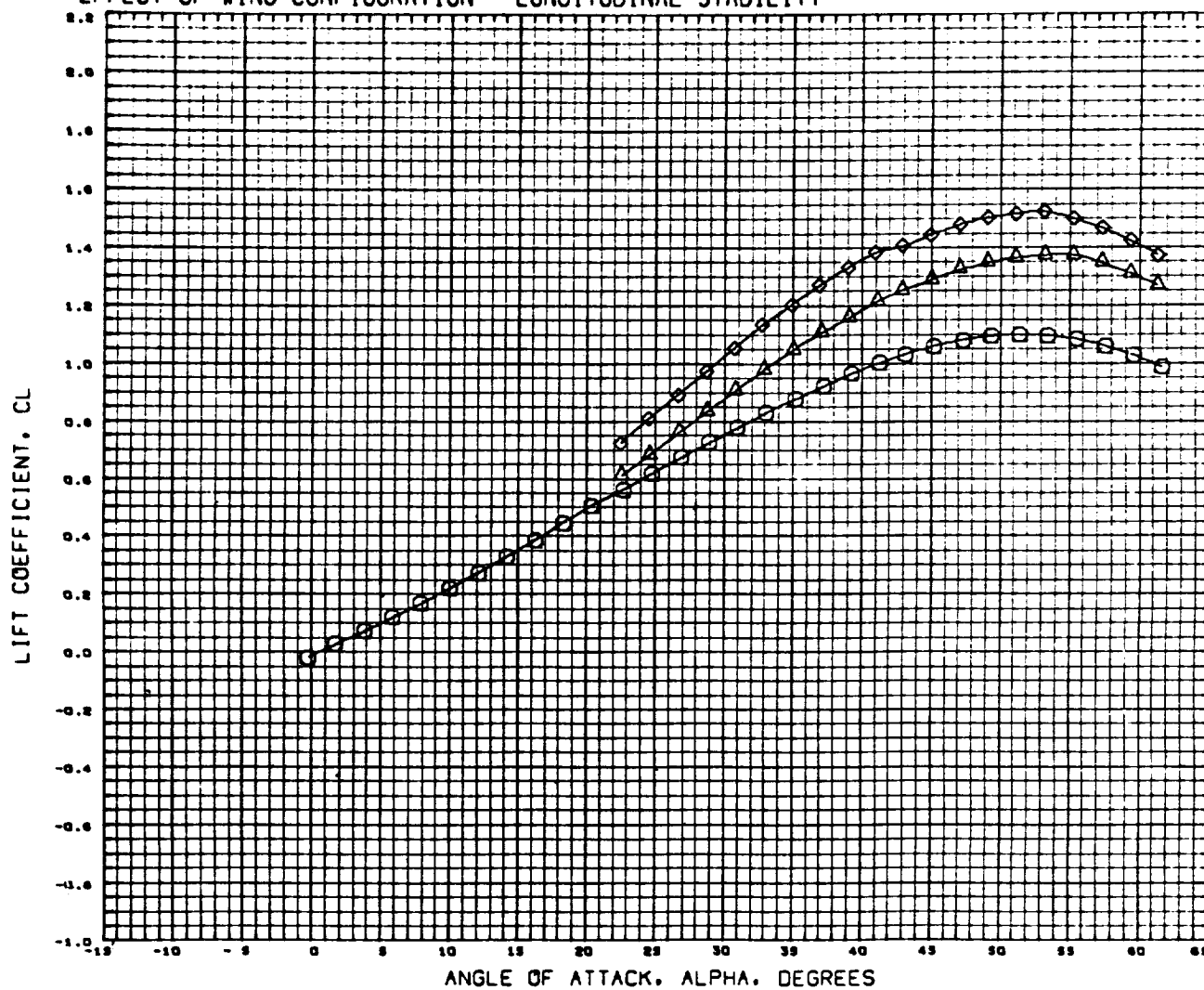


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	MODEL	W9B2V1	BETA	ELEVTR	AILRON
(F3823X)	M496-MSFC	AR11981-3	W9B2V1	0.000	0.000	0.000
(F3826X)	M496-MSFC	AR11981-3	W4B2V2	0.000	0.000	0.000
(F3809X)	M496-MSFC	AR11981-3	W6B2V2	0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

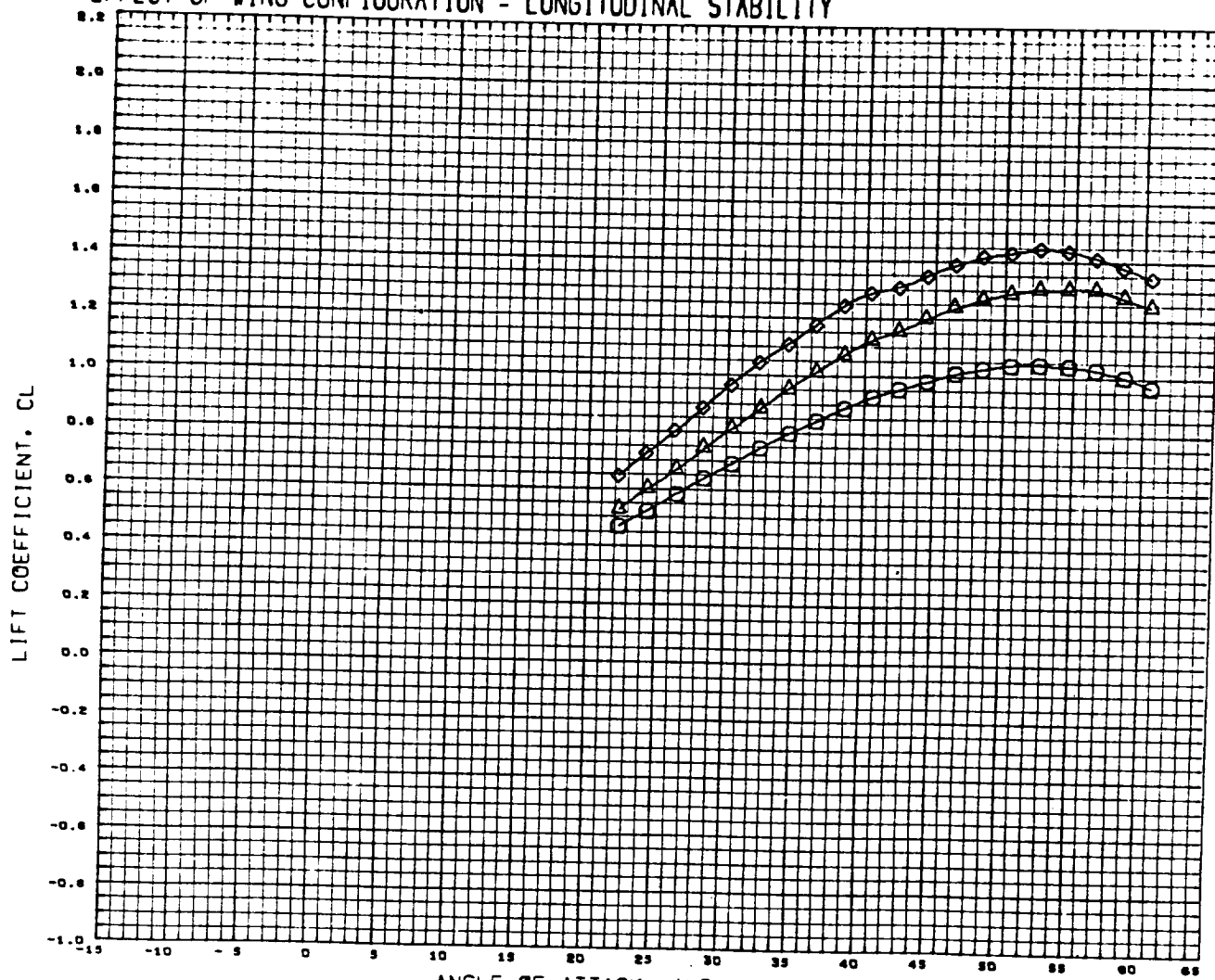


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(P3823X)	M496-MSFC AR11901-3 MODEL W982V1	0.000	0.000	0.000
(P3829X)	M496-MSFC AR11901-3 MODEL W482V2	0.000	0.000	0.000
(P3909X)	M496-MSFC AR11901-3 MODEL W982V2	0.000	0.000	0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 3.400

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

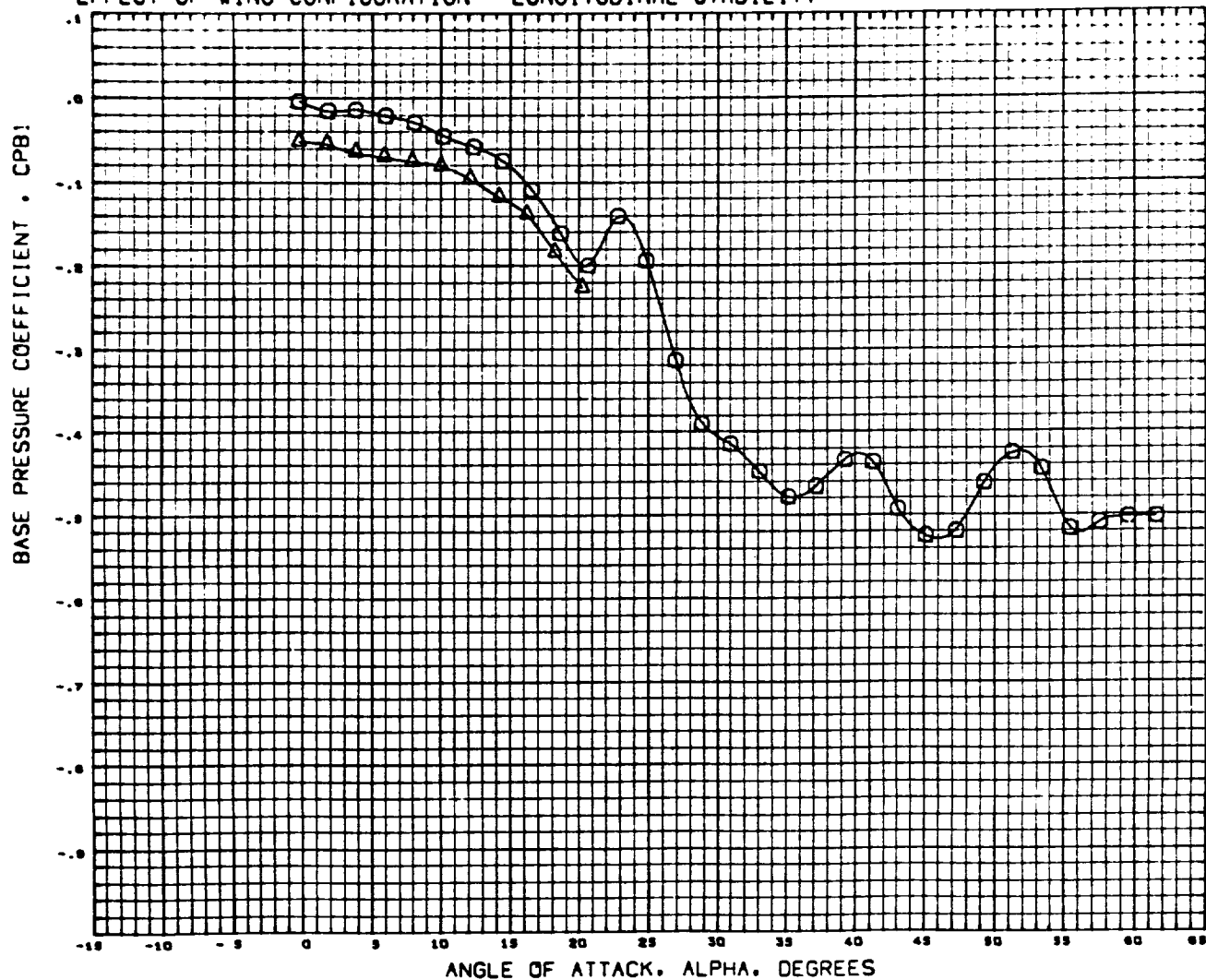
(F3523X)	○	M496-MSFC	AR11981-3	MODEL	W9B2V1
(F3528X)	△	M496-MSFC	AR11981-3	MODEL	W4B2V2
(F3509X)	◇	M496-MSFC	AR11981-3	MODEL	W6B2V2

BETA	ELEVTR	AILWON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 4.959

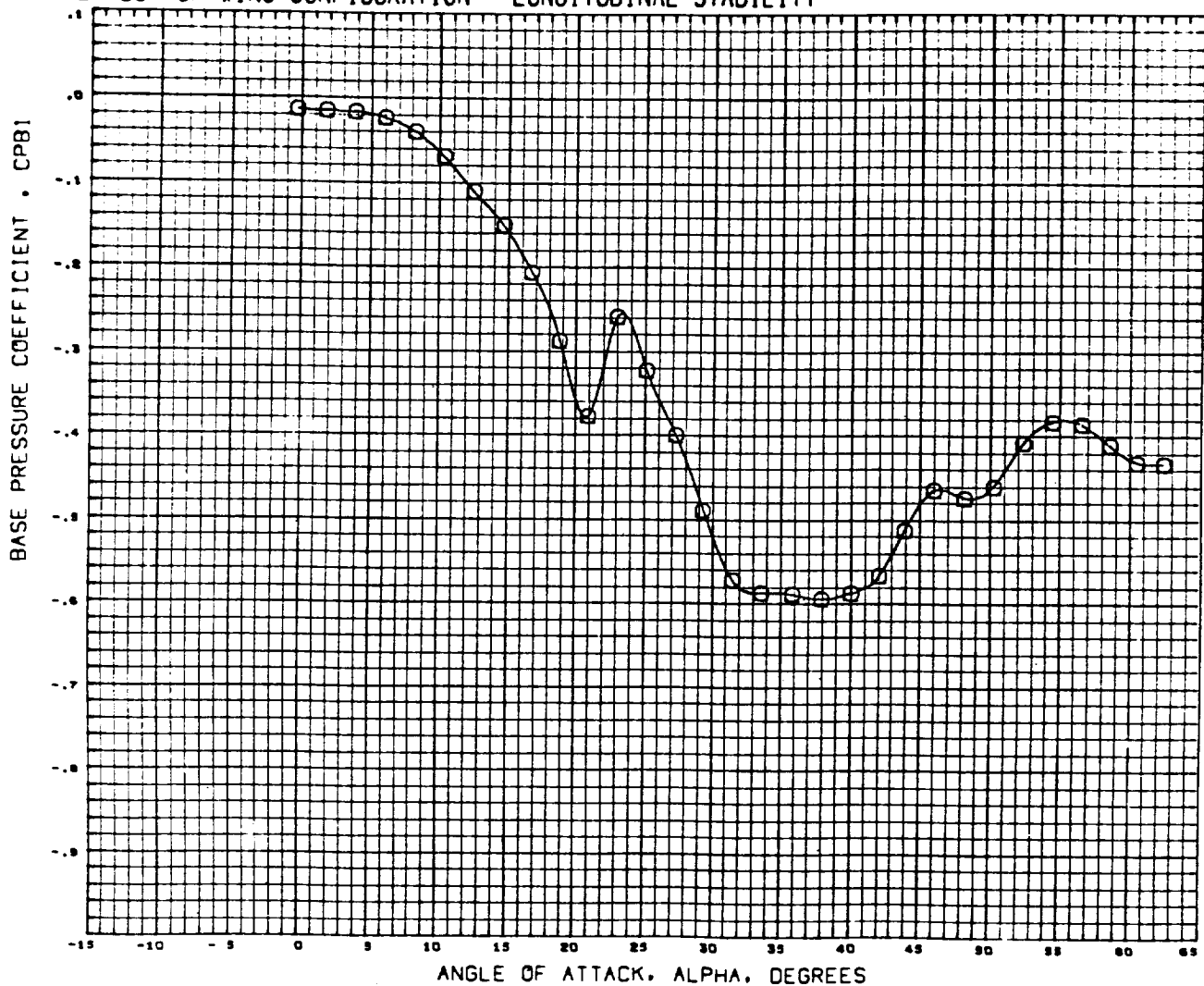
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-M3FC AR11981-3 MODEL W882V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3028X)	M496-M3FC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(P3009X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.999

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



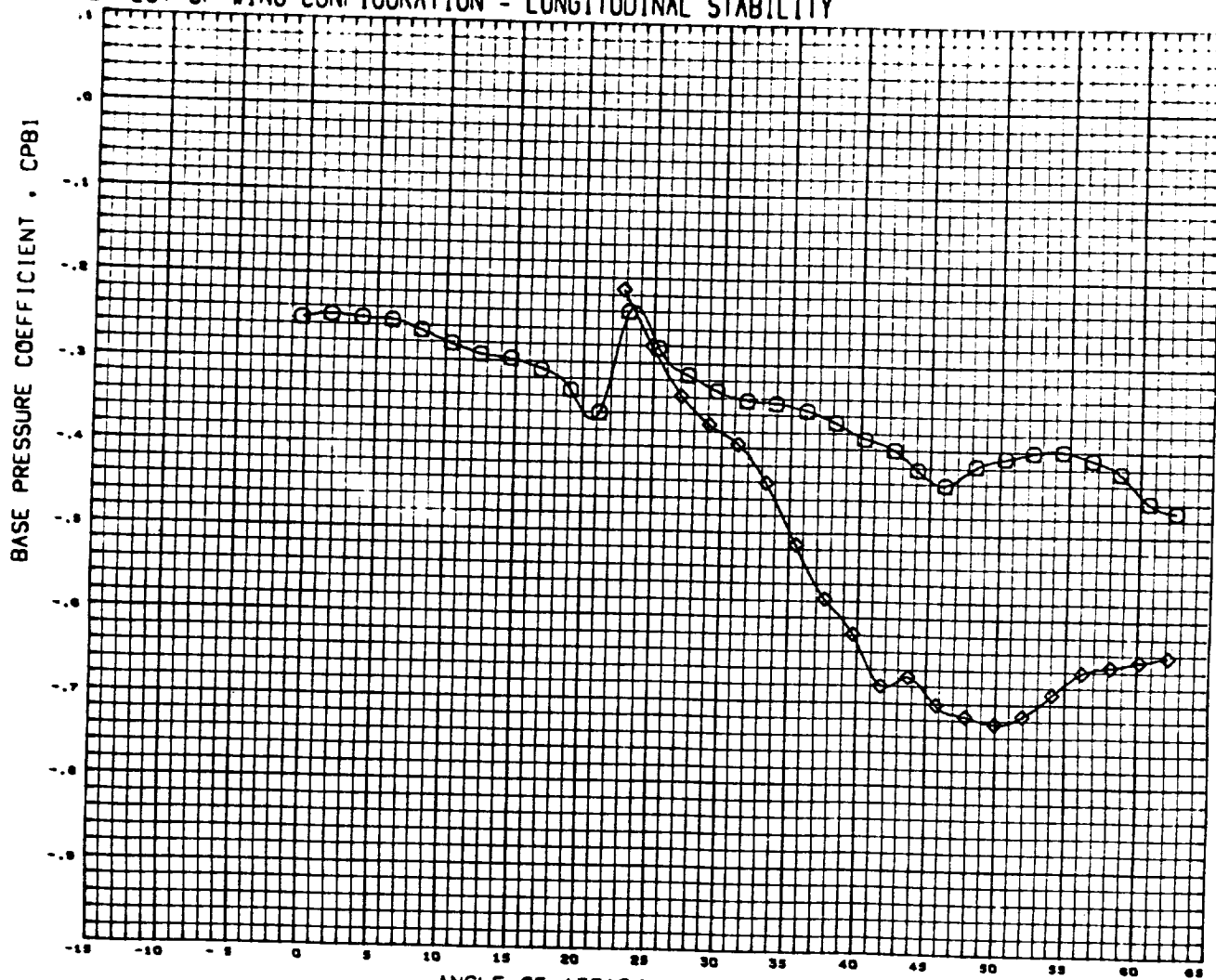
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (P3823X) M496-MSFC AR11981-3 MODEL W982V1
 (P3828X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (P3829X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA ELEVTR ATLRON
 0.000 0.000 0.000
 0.000 0.000 0.000
 0.000 0.000 0.000

SEE THE ASSOCIATED DATA
 DOCUMENT FOR REFERENCE
 CHARACTERISTICS

MACH 0.900

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

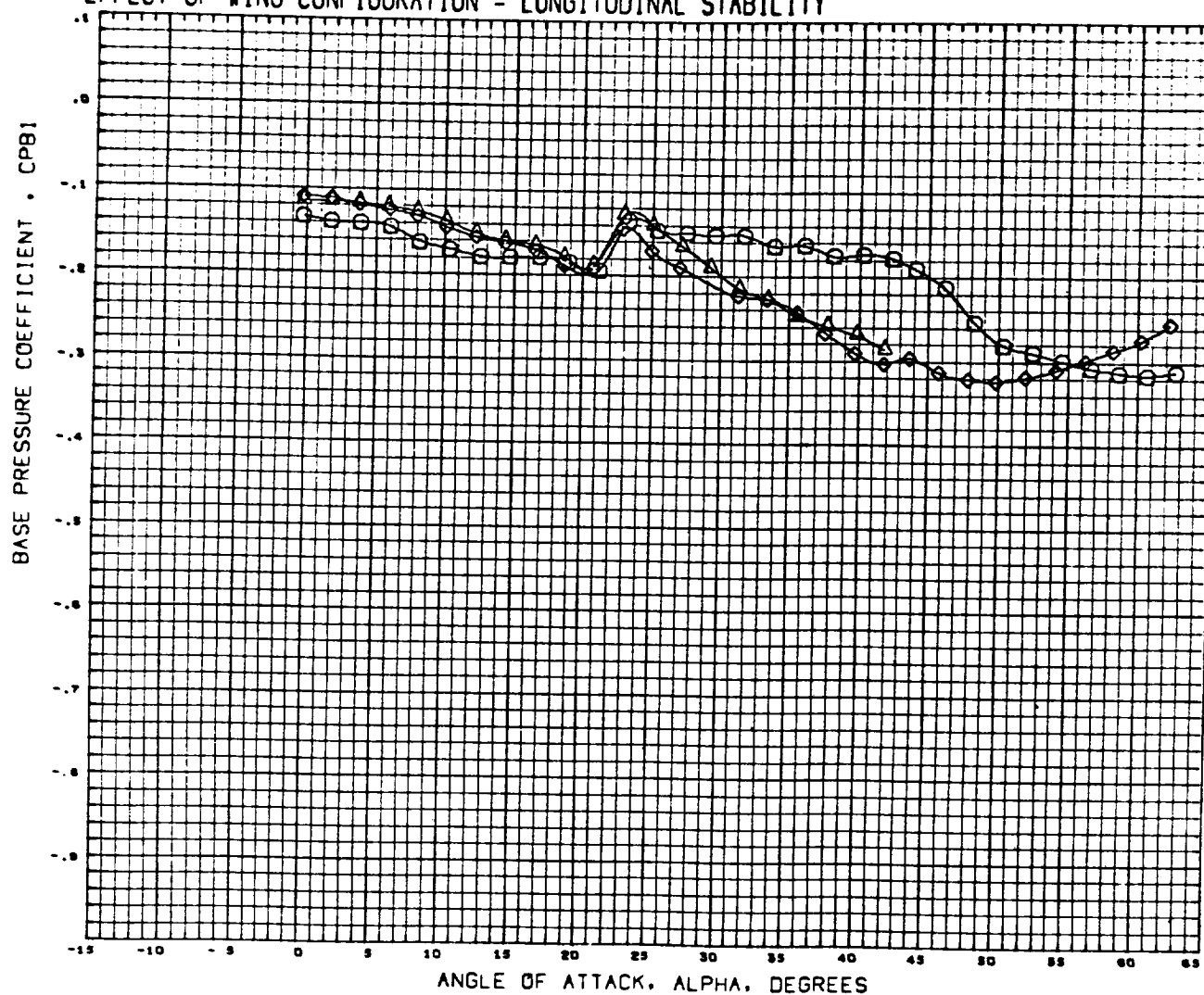
(F3623X)	○	M496-MSFC	AR11981-3	MODEL	W882V1
(F3626X)	△	DATA NOT AVAILABLE FOR ALL CONDITIONS			
(F3608X)	◇	M496-MSFC	AR11981-3	MODEL	W882V2

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

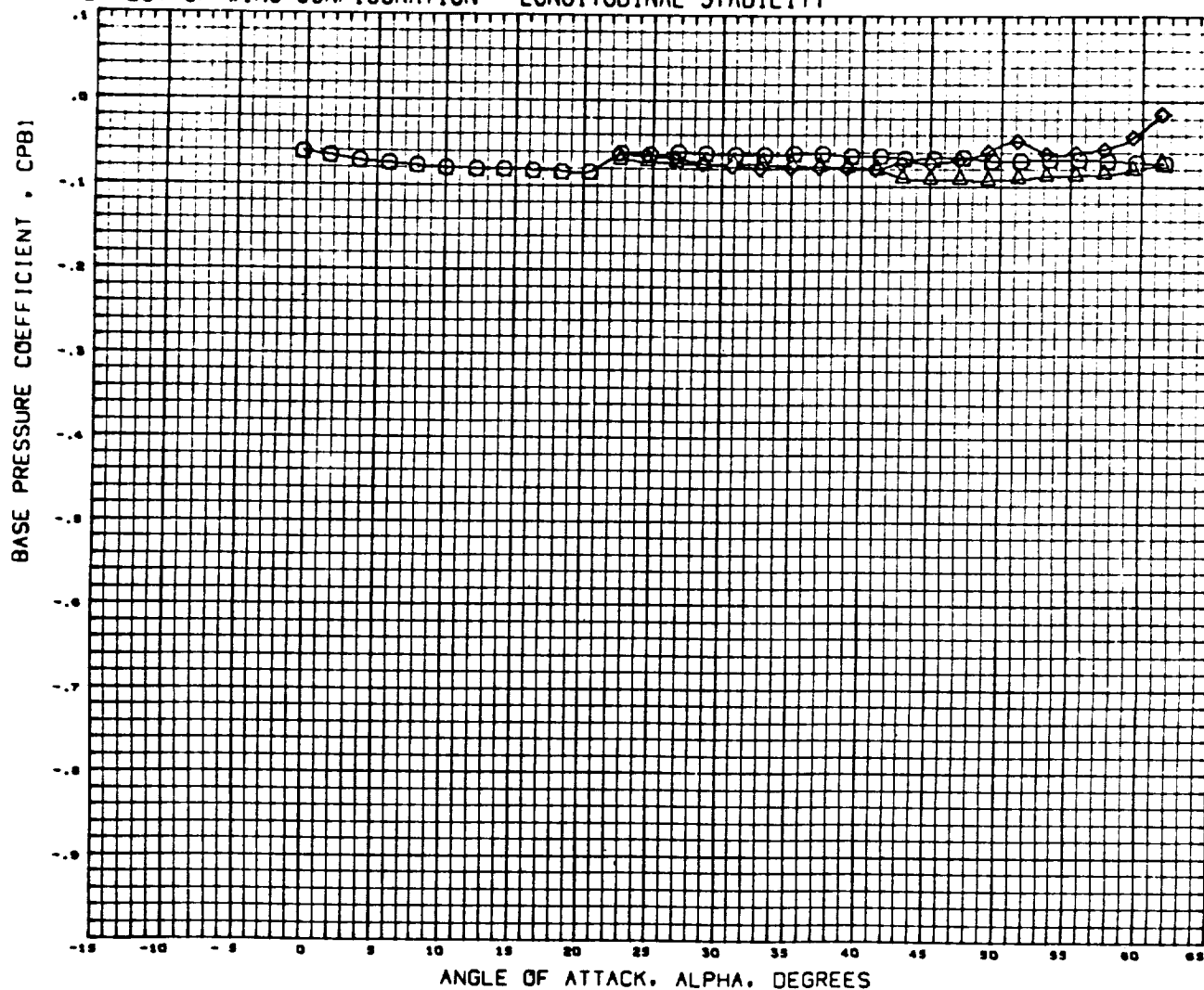


DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON
(F3823X)	○	M496-MSFC AR11981-3 MODEL W9B2V1	0.000	0.000	0.000
(F3826X)	△	M496-MSFC AR11981-3 MODEL W4B2V2	0.000	0.000	0.000
(F3829X)	◇	M496-MSFC AR11981-3 MODEL W6B2V2	0.000	0.000	0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 1.961

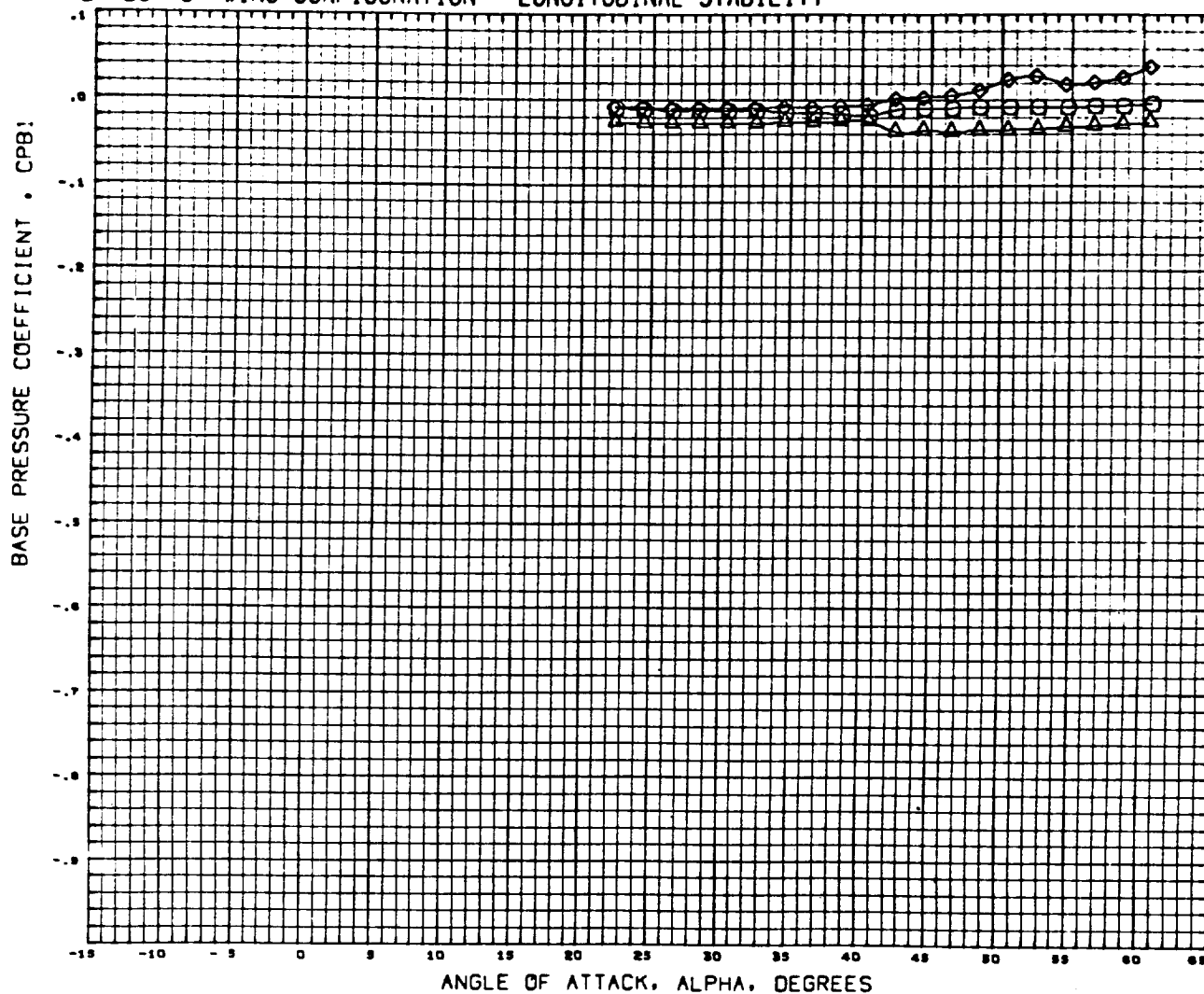
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3623X)	M496-MSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3626X)	M496-MSFC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(P3609X)	M496-MSFC AR11981-3 MODEL W682V2	0.000	0.000	0.000	

MACH 3.480

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(F3823X) (F3828X) (F3809X)

M496-MSFC AR11981-3 MODEL

MODEL

W82V1

BETA

ELEVTR

AILRON

0.000

0.000

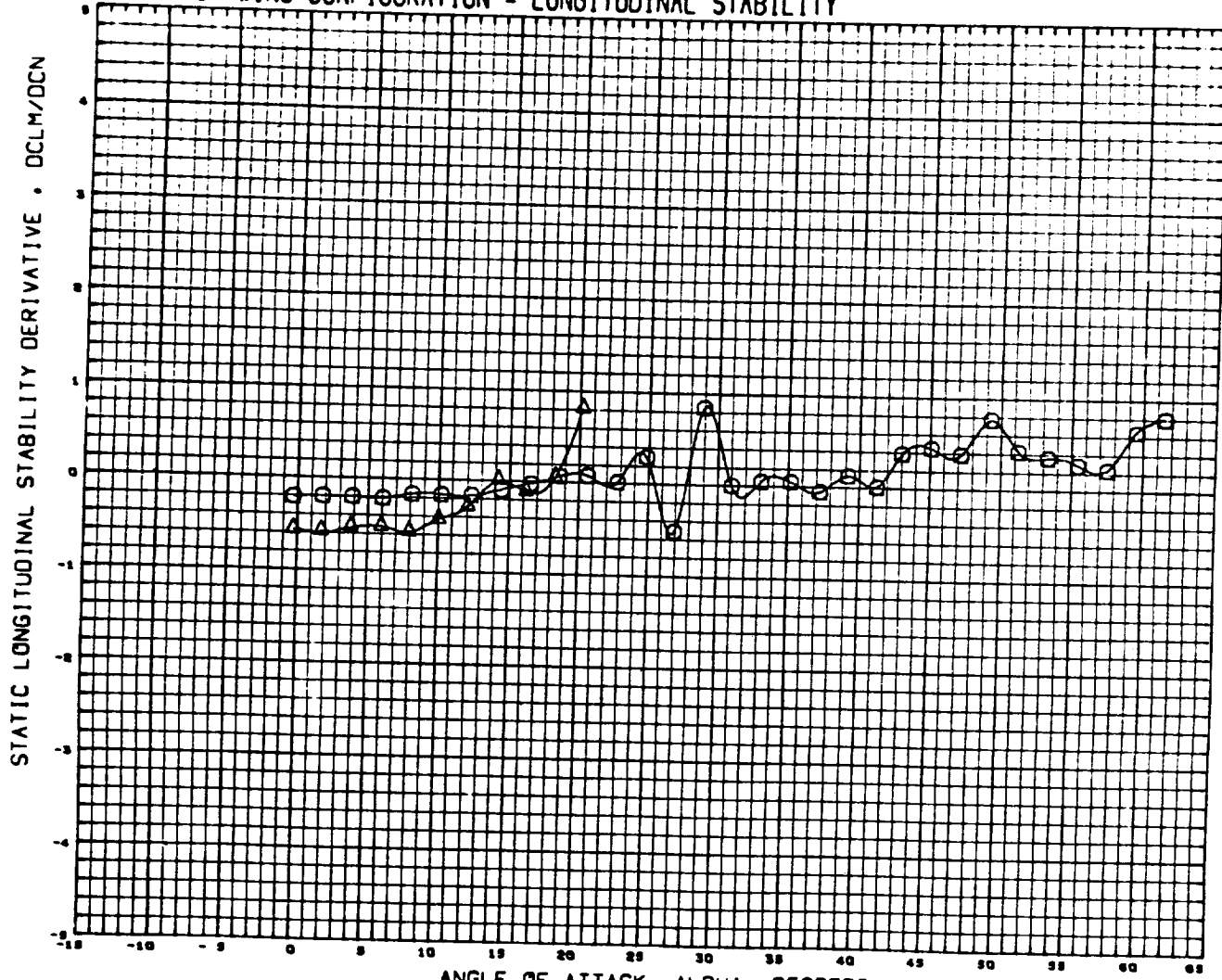
0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH

4.959

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

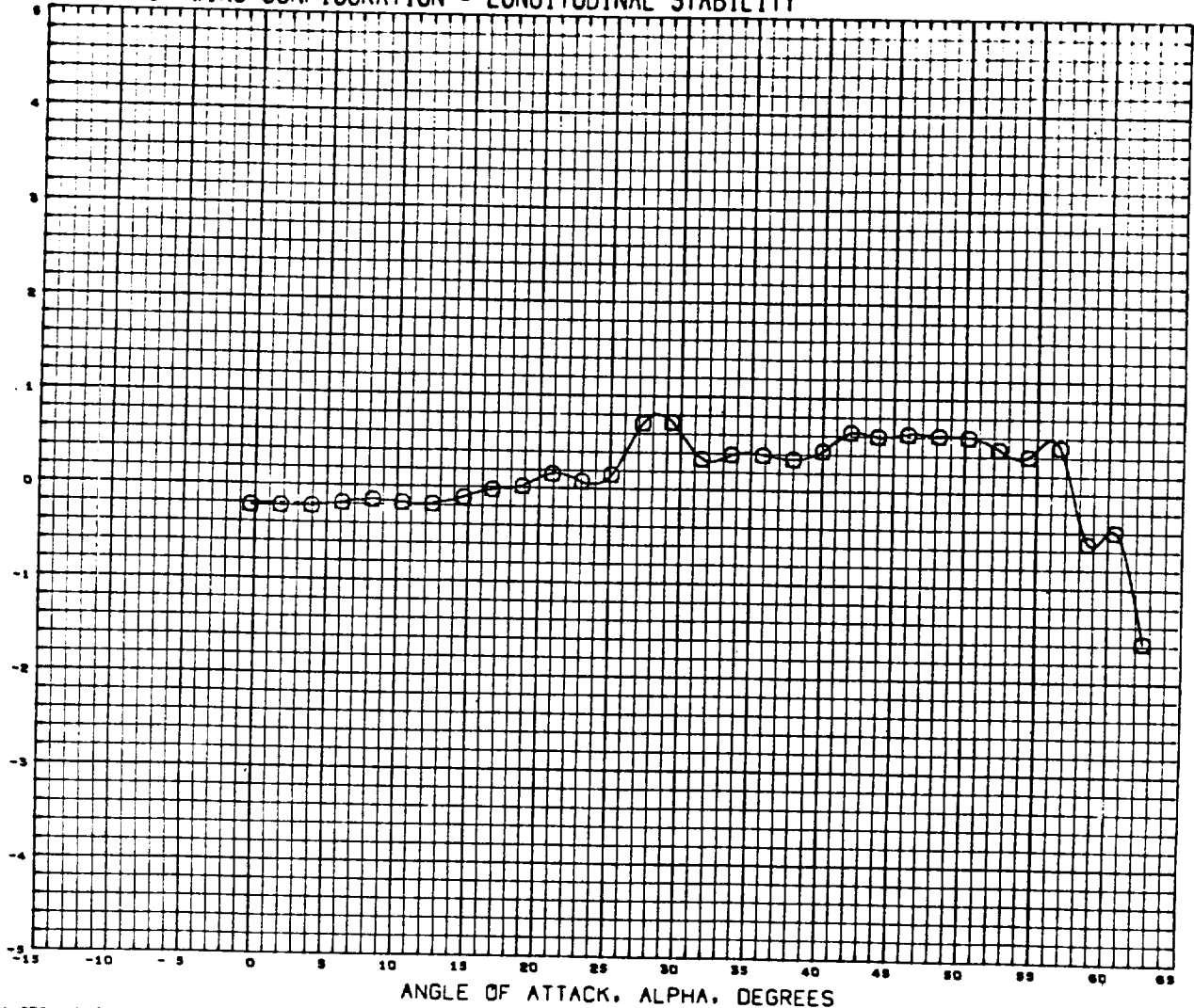


DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3823X)	M496-HSFC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3828X)	M496-HSFC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(P3809X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.599

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • $\frac{dC_{Lm}}{d\alpha}$

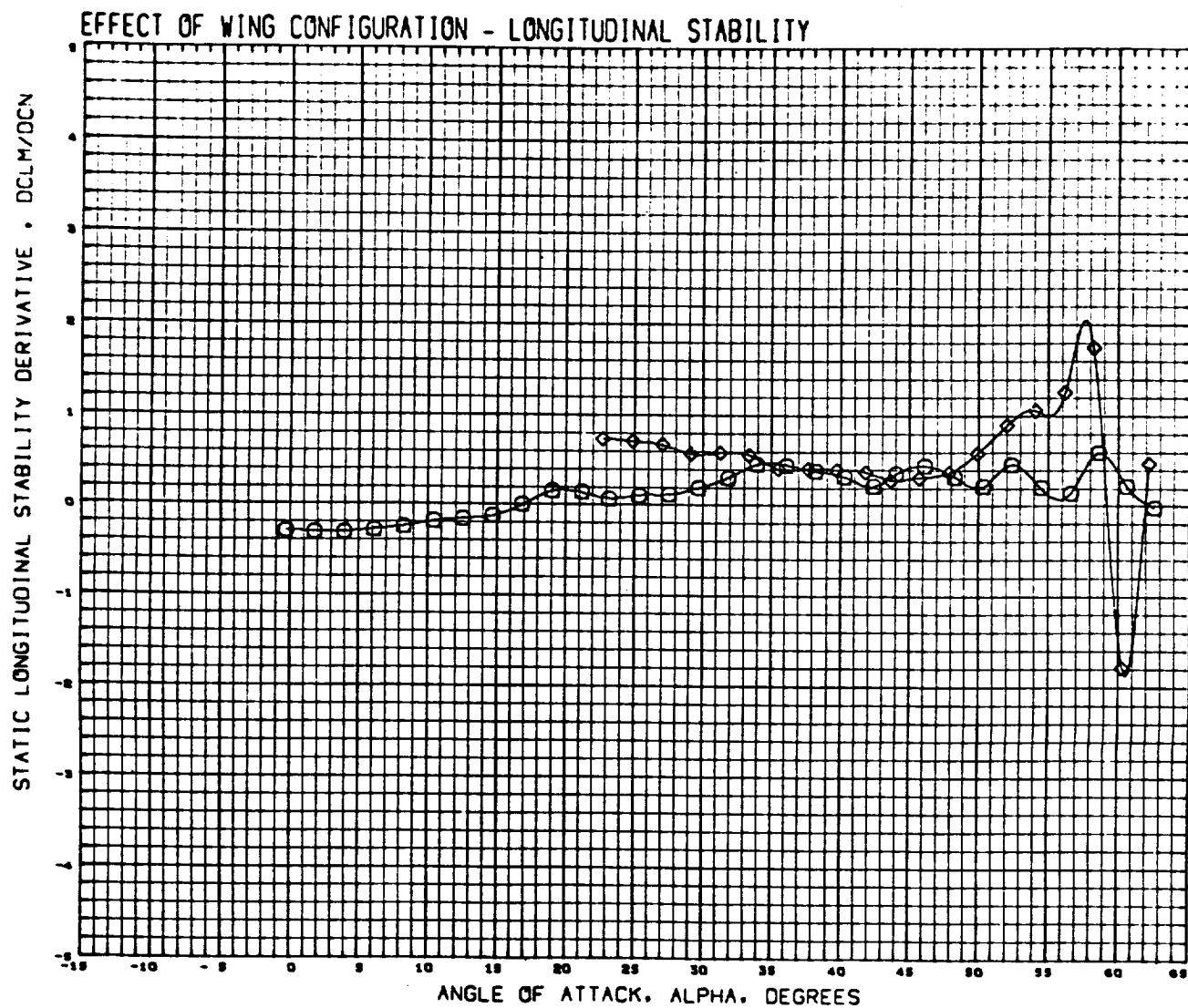


DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-HSFC AR11981-3 MODEL W982V1
 (F3828X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3909X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

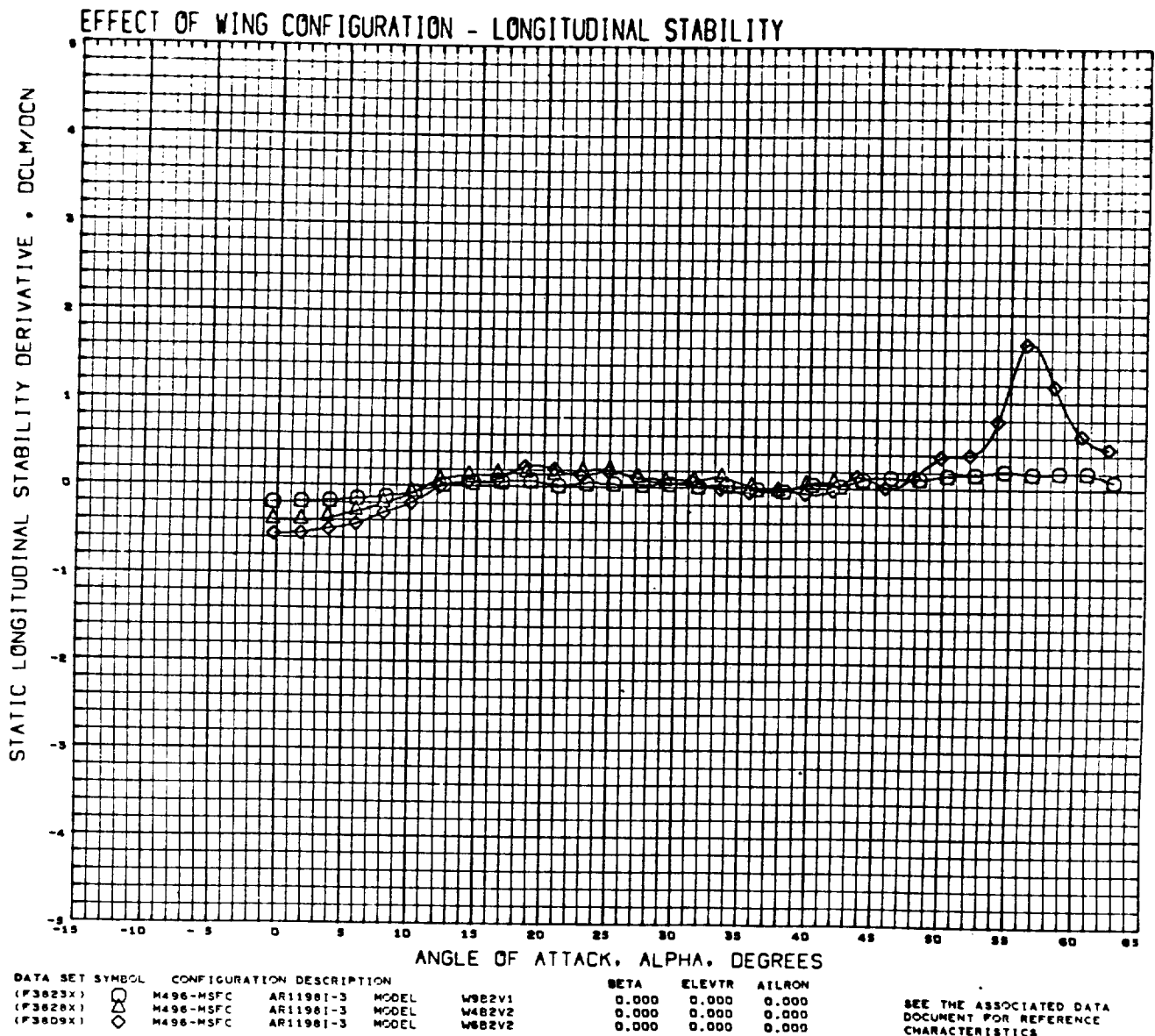
MACH 0.900



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-MSFC AR11981-3 MODEL W882V1	0.000	0.000	0.000	
(P3020X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	
(P3009X)	M496-MSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

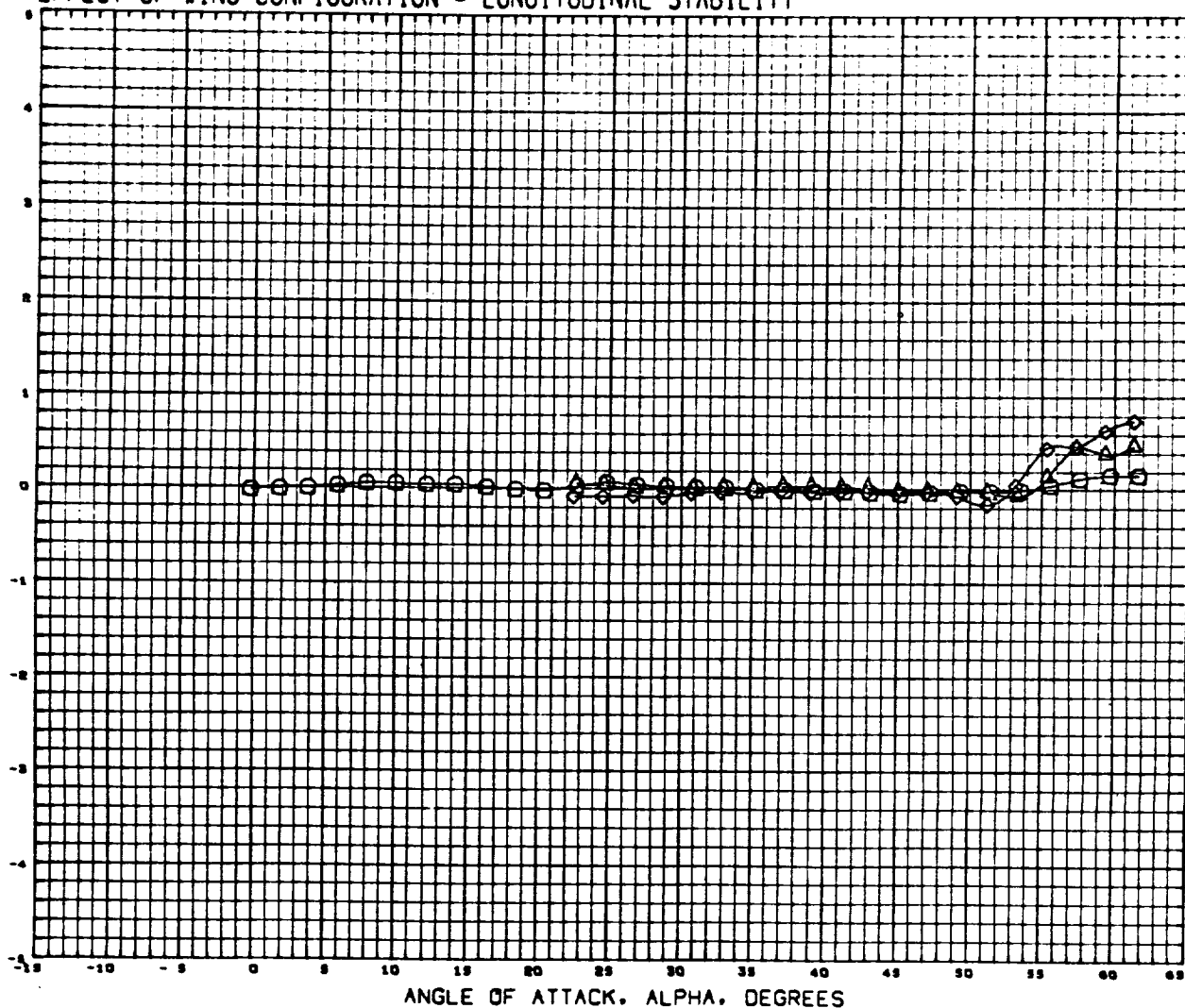
MACH 1.201



MACH 1.961

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY

STATIC LONGITUDINAL STABILITY DERIVATIVE • DCLM/DCN

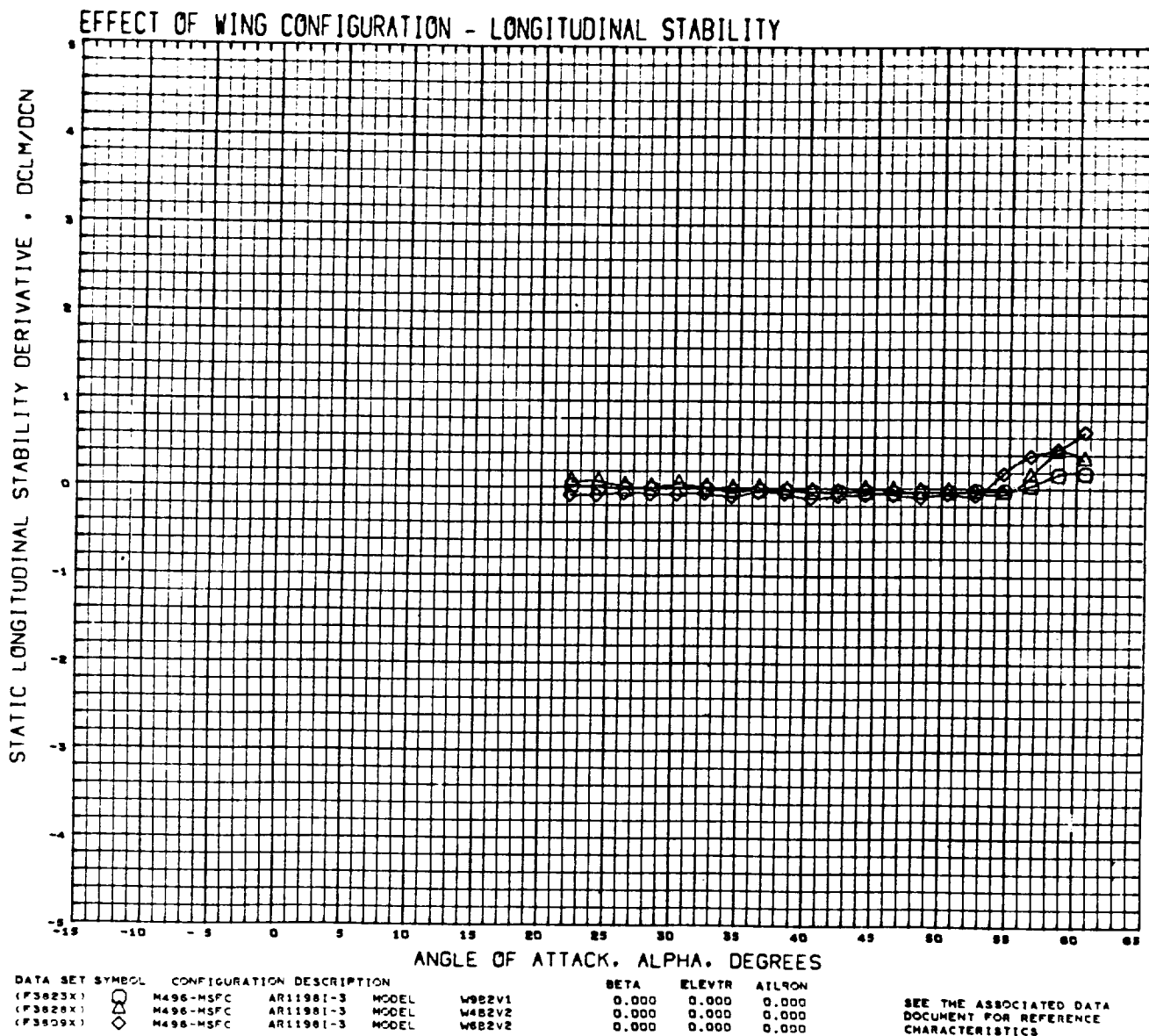


DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(P3023X)	M496-NSFC AR11981-3 MODEL W982V1
(P3020X)	M496-NSFC AR11981-3 MODEL W482V2
(P3009X)	M496-NSFC AR11981-3 MODEL W682V2

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

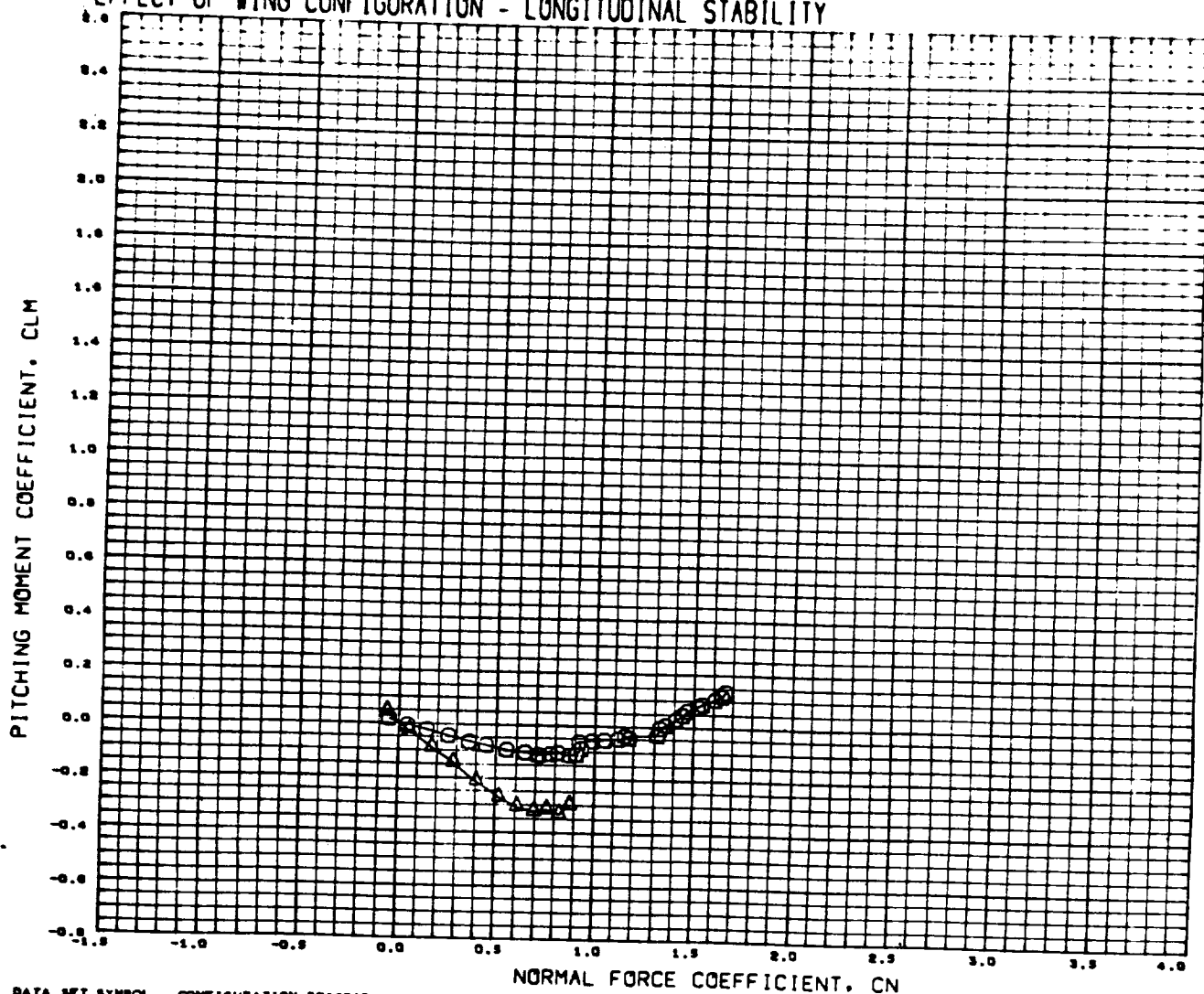
SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 3.400



MACH 4.959

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

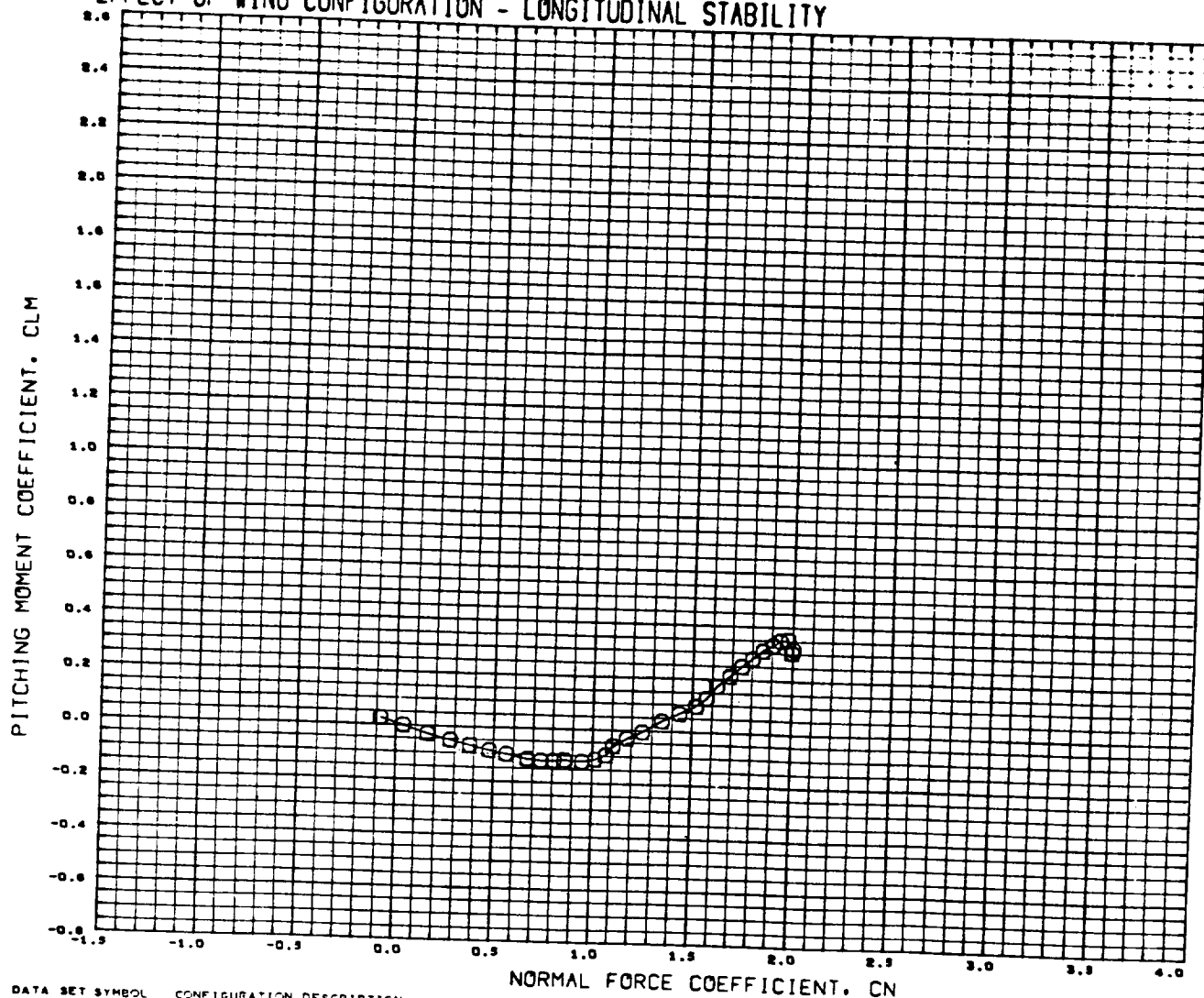
(P3023X) M496-M3FC ARI1981-3 MODEL W982V1
(P3020X) M496-M3FC ARI1981-3 MODEL W982V2
(P3009X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 0.999

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



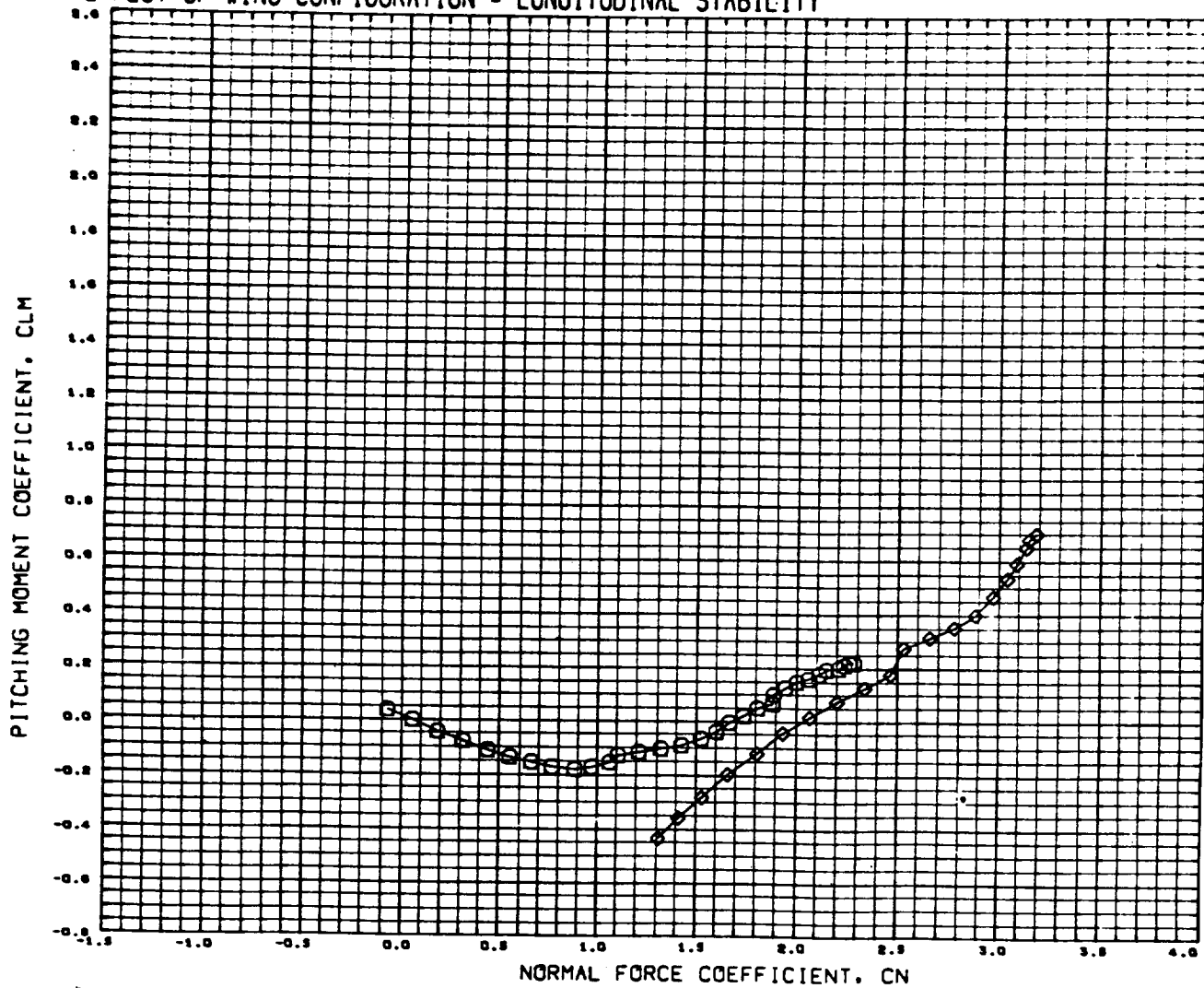
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-MSFC AR119R1-3 MODEL W9B2V1
 (F3828X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 0.900

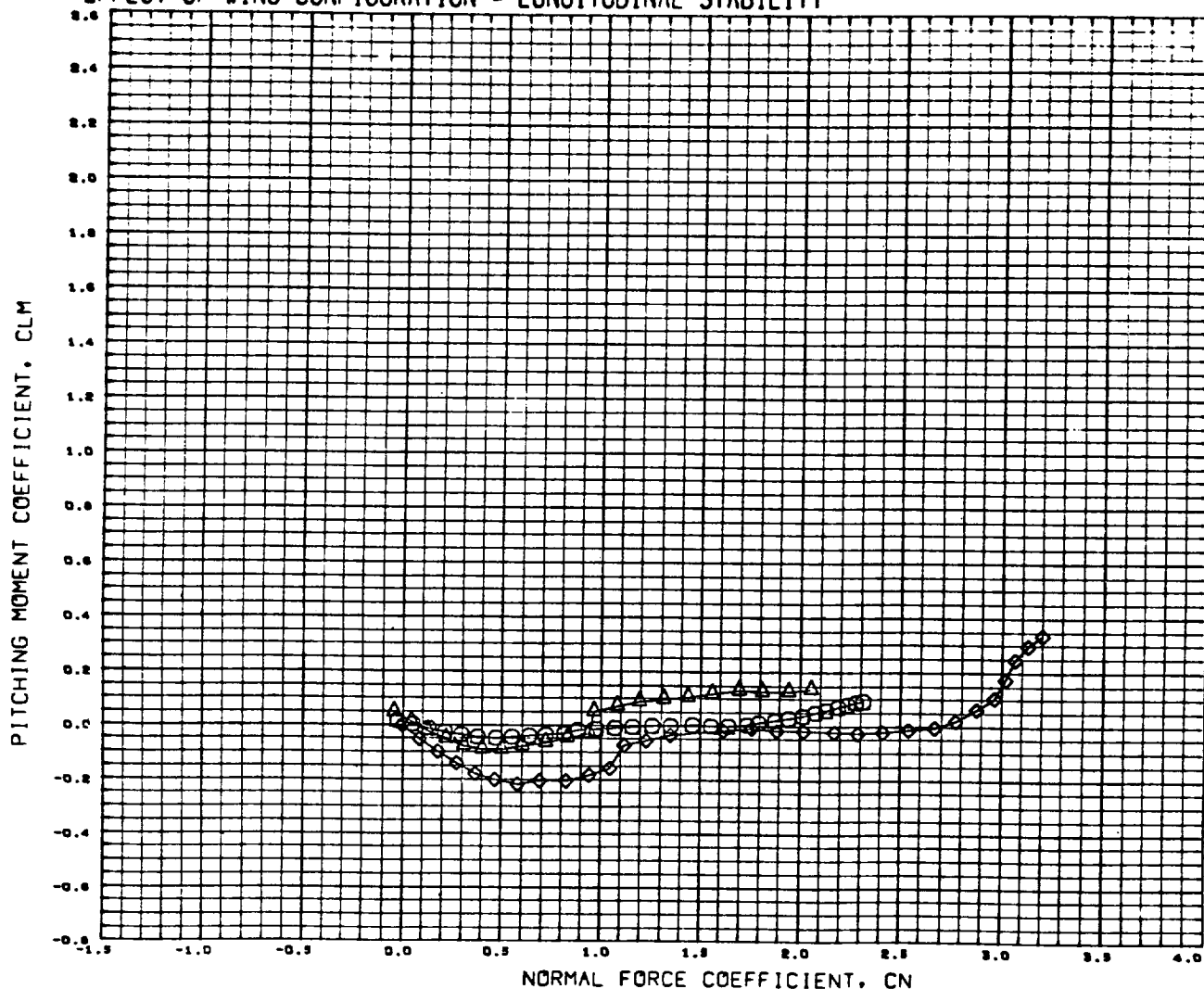
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-MSFC AR11981-3 MODEL W882V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3029X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	
(P3009X)	M496-MSFC AR11981-3 MODEL W882V2	0.000	0.000	0.000	

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



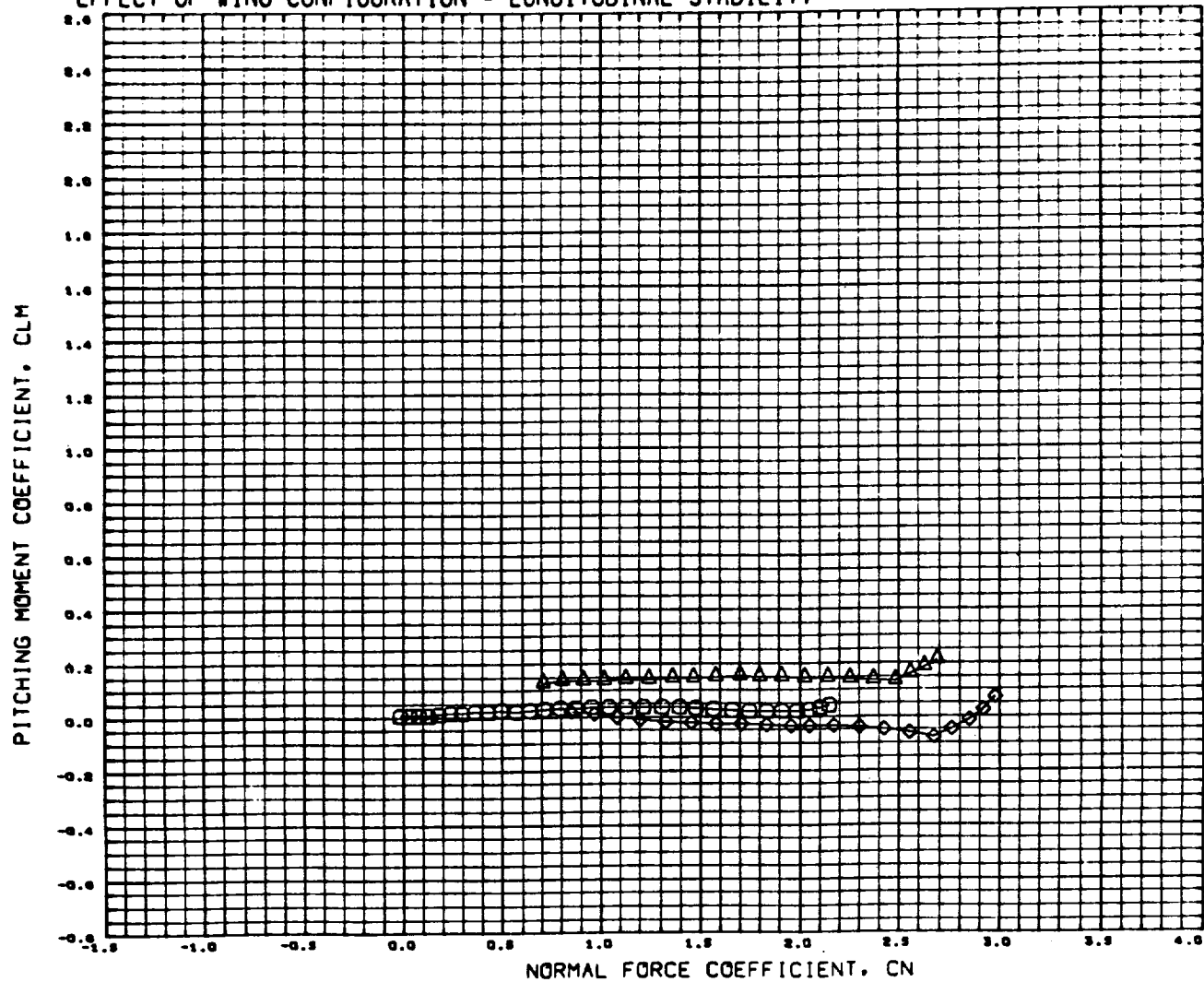
DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(P3823X)	M496-HSFC AR11991-3 MODEL W982V1
(P3824X)	M496-HSFC AR11981-3 MODEL W482V2
(P3809X)	M496-HSFC AR11991-3 MODEL W682V2

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(P3623X)	H496-MSFC AR11981-3 MODEL
(P3626X)	H496-MSFC AR11981-3 MODEL
(P3629X)	H496-MSFC AR11981-3 MODEL

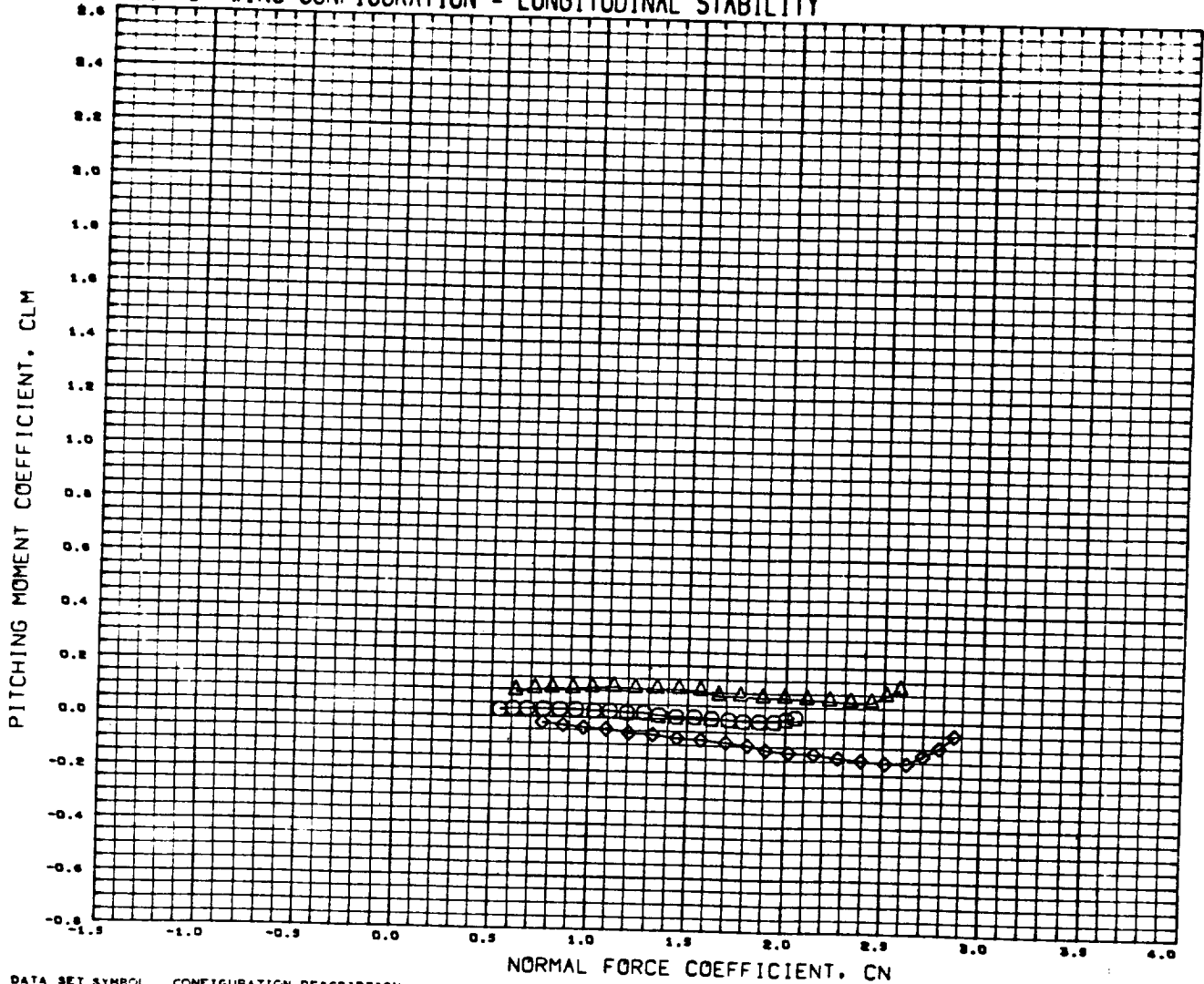
NORMAL FORCE COEFFICIENT, CN

BETA	ELEVTR	ATLRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 3.400

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL CONFIGURATION DESCRIPTION

(F3623X)	○	M496-MSFC	AR11981-3	MODEL
(F3629X)	△	M496-MSFC	AR11981-3	MODEL
(F3609X)	◇	M496-MSFC	AR11981-3	MODEL

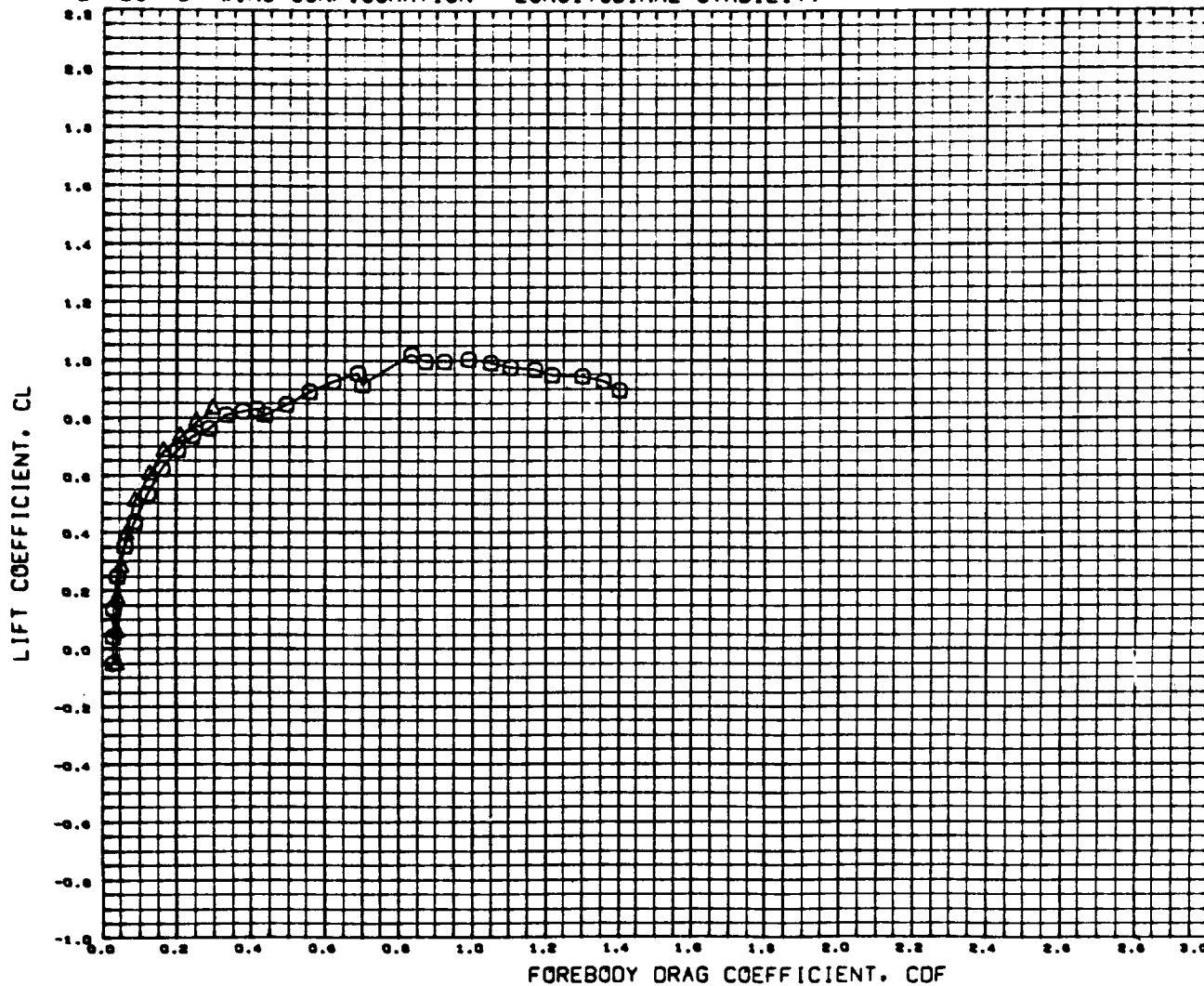
NORMAL FORCE COEFFICIENT, CN

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 4.959

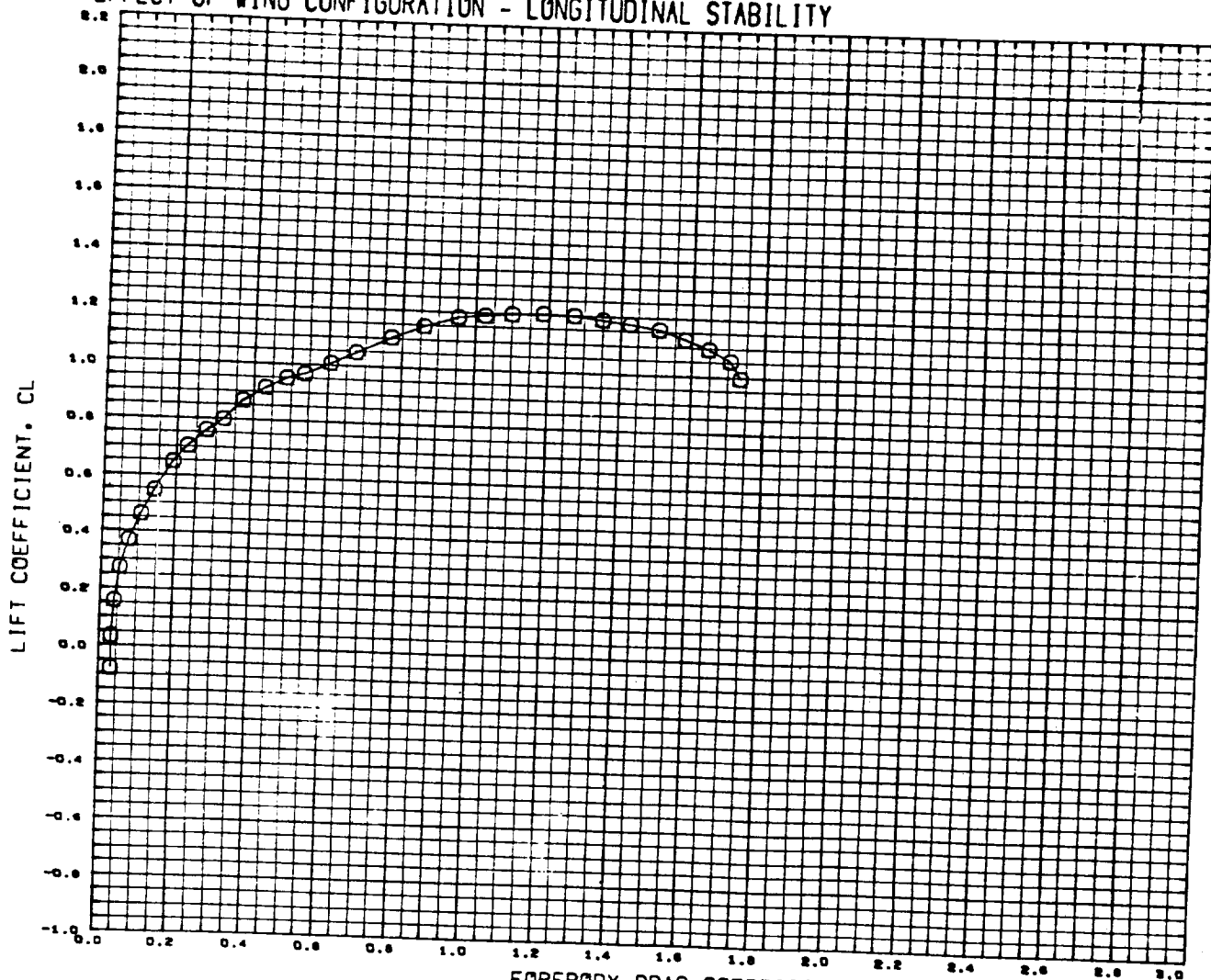
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(F3823X)	M496-MSPC AR11981-3 MODEL W982V1	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(F3826X)	M496-MSPC AR11981-3 MODEL W482V2	0.000	0.000	0.000	
(F3809X)	DATA NOT AVAILABLE FOR ALL CONDITIONS	0.000	0.000	0.000	

MACH 0.999

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



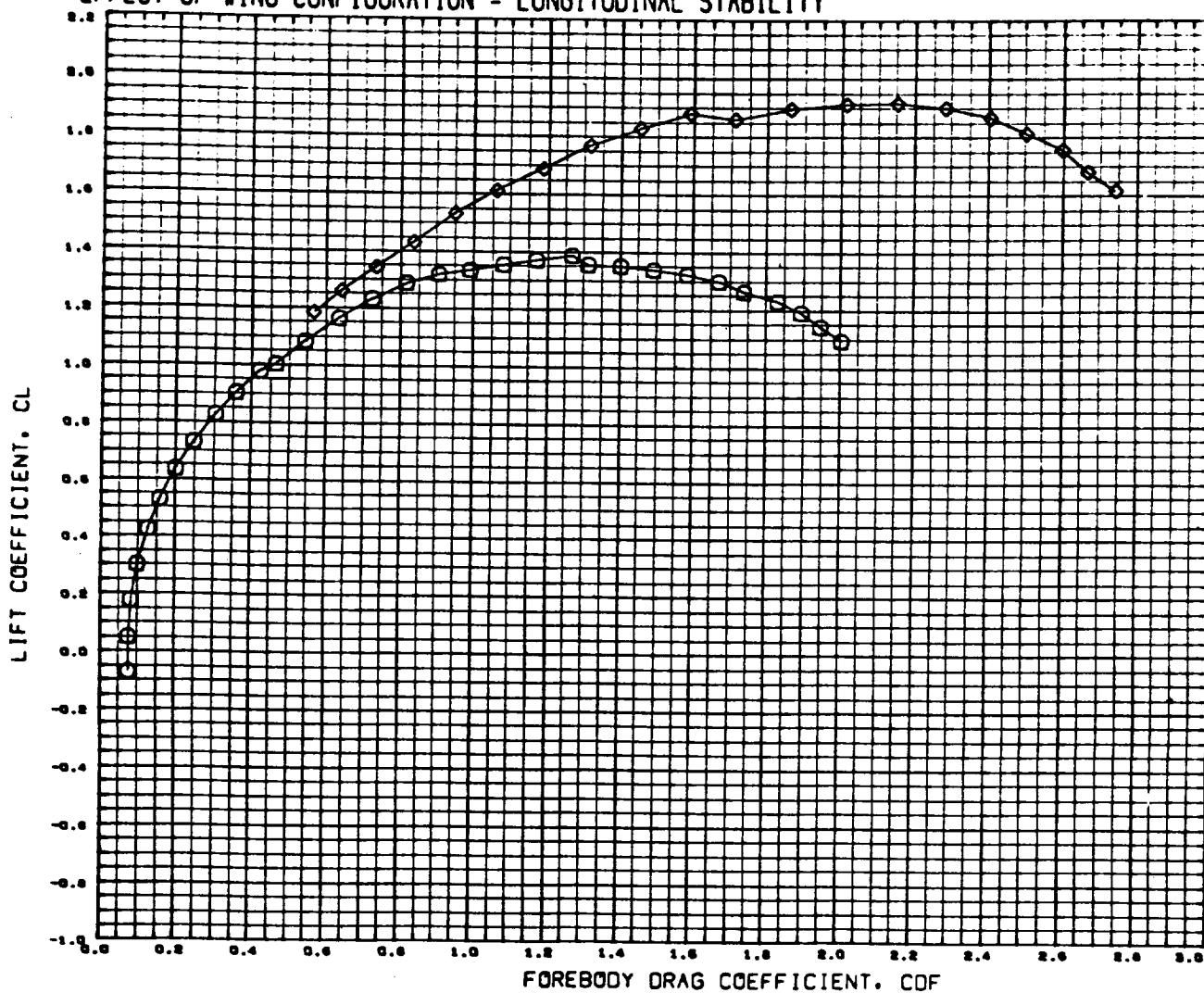
DATA SET SYMBOL CONFIGURATION DESCRIPTION
 (F3823X) M496-MSFC AR11981-3 MODEL W9B2V1
 (F3829X) DATA NOT AVAILABLE FOR ALL CONDITIONS
 (F3809X) DATA NOT AVAILABLE FOR ALL CONDITIONS

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

PACH 0.900

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



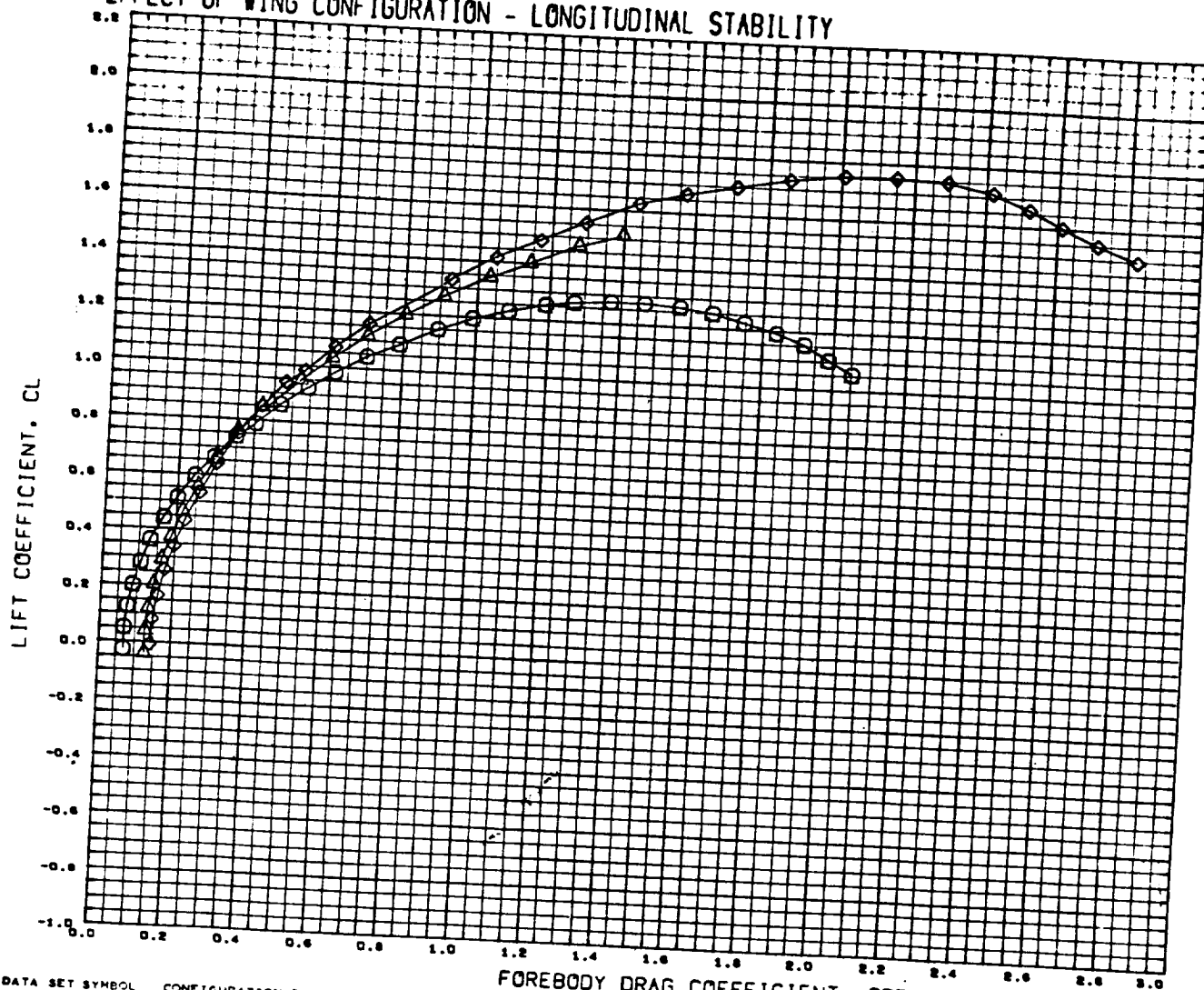
DATA SET SYMBOL CONFIGURATION DESCRIPTION
(P3882X) \diamond N496-MSFC AR11961-3 MODEL W882V1
(P3886X) \circ DATA NOT AVAILABLE FOR ALL CONDITIONS
(P3889X) \diamond N496-MSFC AR11961-3 MODEL W882V2

BETA ELEVTR AILRON
0.000 0.000 0.000
0.000 0.000 0.000
0.000 0.000 0.000

SEE THE ASSOCIATED DATA
DOCUMENT FOR REFERENCE
CHARACTERISTICS

MACH 1.201

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET	SYMBOL	CONFIGURATION DESCRIPTION
(P3823X)	○	M496-MSFC AR11981-3 MODEL
(P3826X)	△	M496-MSFC AR11981-3 MODEL
(P3809X)	◇	M496-MSFC AR11981-3 MODEL

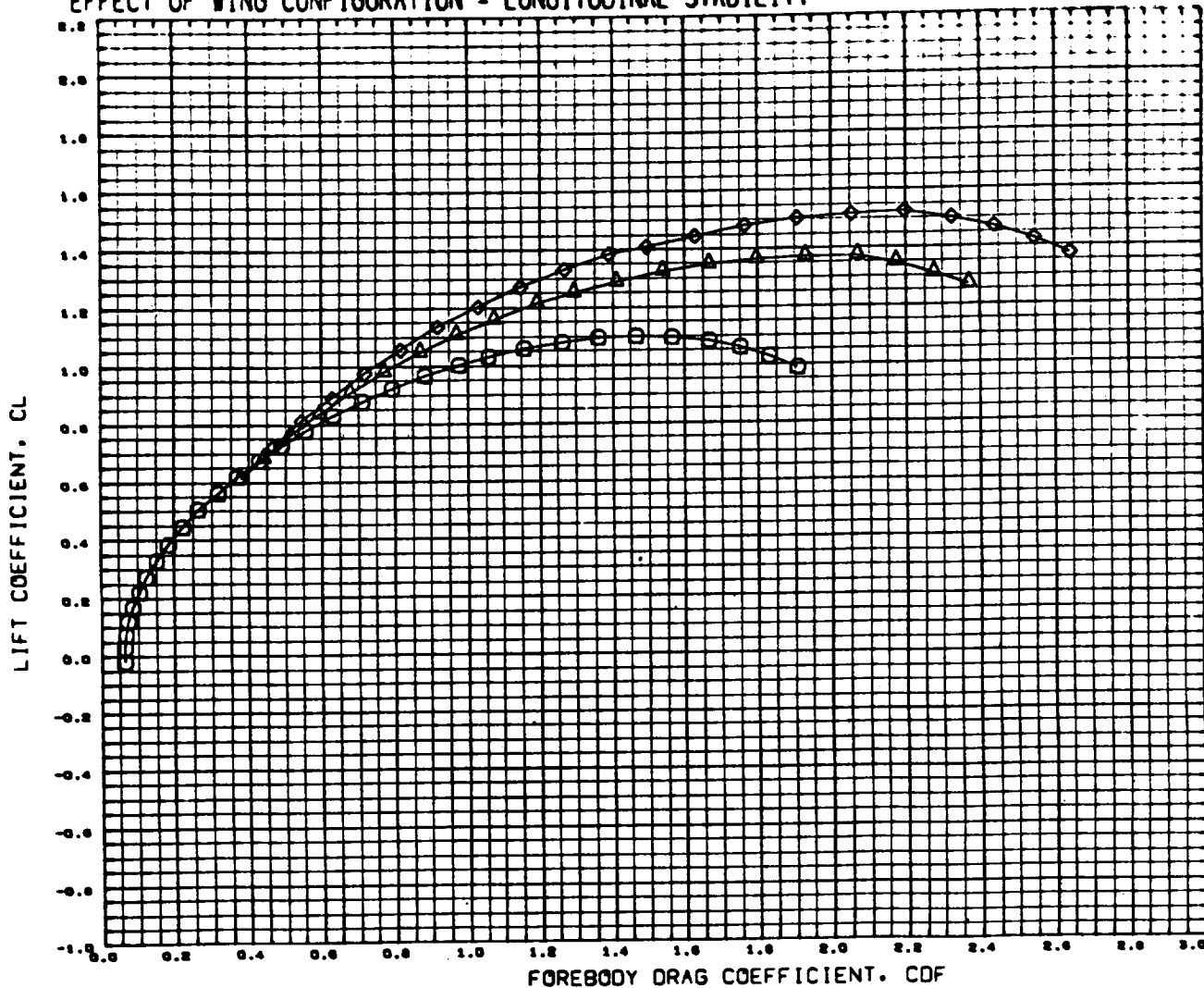
FOREBODY DRAG COEFFICIENT, CDF

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 1.961

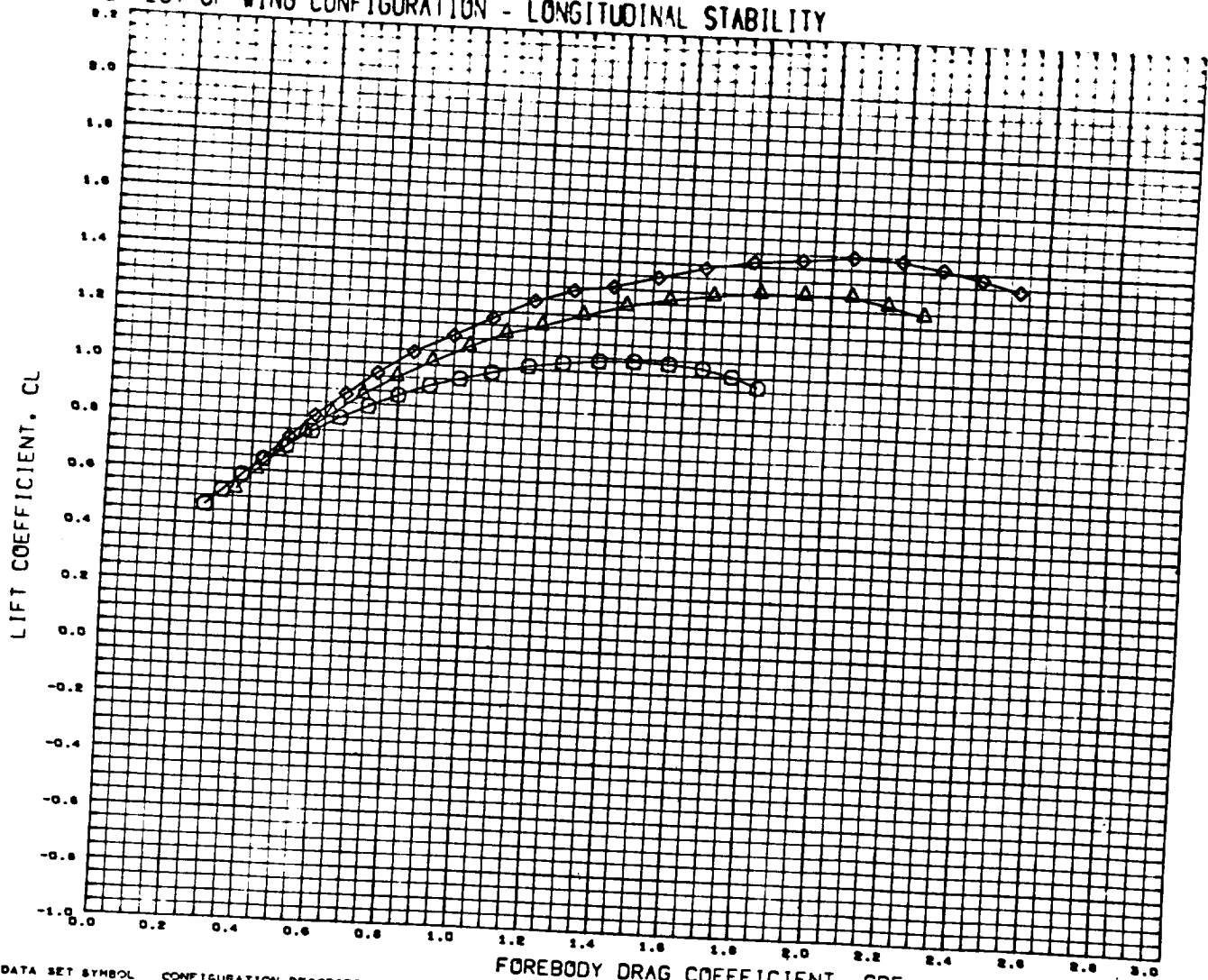
EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION	BETA	ELEVTR	AILRON	
(P3023X)	M496-N3PC AR11981-3 MODEL	0.000	0.000	0.000	SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS
(P3020X)	M496-N3PC AR11981-3 MODEL	0.000	0.000	0.000	
(P3009X)	M496-N3PC AR11981-3 MODEL	0.000	0.000	0.000	

MACH 3.400

EFFECT OF WING CONFIGURATION - LONGITUDINAL STABILITY



DATA SET SYMBOL	CONFIGURATION DESCRIPTION
(P3823X)	M496-HSFC AR11981-3 MODEL
(P3826X)	M496-HSFC AR11981-3 MODEL
(P3809X)	M496-HSFC AR11981-3 MODEL

FOREBODY DRAG COEFFICIENT, CDF

BETA	ELEVTR	AILRON
0.000	0.000	0.000
0.000	0.000	0.000
0.000	0.000	0.000

SEE THE ASSOCIATED DATA DOCUMENT FOR REFERENCE CHARACTERISTICS

MACH 4.959

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